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1st Quarter 1992

Issue 14



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1000

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Final Reviewers _____ **ST Editor**
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(Please send this article to info@ST.in.Paul.maffei.com and to the Editor). With the new editorial group during the last 12 years we have some new to some articles as well!

It was produced by the U.S. HHS within the HHS/NIH for the enjoyment of everyone who loves their dogs.

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If you are interested in this advertisement, we are able to assist in the following: **2-CD-ROM TALKING GROUND**, **FM Cities**, **FM World**. If you are interested in any of these items, please contact us at info@fm.com.

[illegible]

Files are transferred from the Host to the ST by directly making the Host drive using a USB disk drive connected to the ST processor and saving the files into ST disk with help from the XMount II software. Standard old X-mount or similar hardware device like the X-Mount cannot connect

The opinions expressed within this article are those of the authors and are not necessarily held by the RSCG.

The 1984-85 season is a very early season for the 1984-85 season.

Copy order for the next issue of *IC* is
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1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

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 Springer

The Bournemouth and Poole Atari User Group is a member of
The Association of Atari User Groups.

Notice Board

Frontier Software Announce Further Price Reductions

As of 16th December, 1991 Frontier Software's range of memory upgrades and their Pogo-Me-Clock II savings have new lower prices. The new prices (including VAT) are:

Xira-RAM Standard on populated	£29.99
Xira-RAM Standard 1/3 MB	£49.99
Xira-RAM Standard 2MB	£89.99

Xira-RAM Deluxe on-populated	£34.99
Xira-RAM Deluxe 1/3 MB	£64.99
Xira-RAM Deluxe 2MB	£109.99
New Model Deluxe 2MB	£139.99

Pogo-Me-Clock II	£17.99
------------------------	--------

Frontier Software
P.O. Box 113, Harrogate, North Yorkshire, England

LACE Reform

The *Edison Atom Computer Enhancement (LACE)* has returned after two years absence as an Atom 8-bit only user group. Glenn Leader is still in charge, with other group members including Simon Drew and Alper Gray. The group has also recruited their newsletter called *Beast*, with issue 3 being released as AM83.

For more information, contact Glenn at 143 Richmond Road, Leytonstone, London E11 4BT, or via TheCry BBS (091-359-1257).

Packet Computer Expans

GP Megaprojects of the Atom Portfolio have just released a glory, offering all the packet computers within their range. These include the Sharp PC3000, Hewlett-Packard HP 95LX, Packet PC (also sold as the Atom Portfolio) and Pico memory compatible with the new industry standard PCMCIA technology.

DMP Systems Limited
31 Frederick Sanger Road, Surrey Research Park,
Guildford, Surrey GU2 8DQ
Telephone: 0443 304555

DIGI-Studio

Dean Garrobbay has recently released *DIGI-Studio*, a program for the Atom XL/30i for creating music using sounds sampled with Replay.

Available as two packages, package 1 includes a keyboard player and tune player (some tunes also supplied). The Keyboard Player allows you to use your computer keyboard like a musical keyboard using any of the sampled sounds provided. Look out for full review within a future issue of S 16.

Package 2 (which is available soon) will allow you to program tunes using short music and save them to disk.

Dean Garrobbay
41 Thomson Ave., Bally, Doncaster, DN4 9NL

WANTED

Do you produce Atom related products?

Want some free advertising?
Then send a press release or information to S 16 and we will put it up on the Notice Board

New Software Company Release 8-bit Product

The following release notice was recently posted on the Info-Atom Digest, advertising a new game soon to be available on the ST, Amiga and PC, which is already available for the Atom 8-bit. If you are interested, I suggest you write (remembering to send an International Reply Coupon) asking them if they will post to the UK and how much the package will be.

"Old computers never die, they just develop faithful user groups. Arcadia Software is debuting its first commercial product, *Pary: The Wrath of Taljen Castle*, which features 100 rooms scattered through five worlds: Time, Space, Atom, Ironet and Pary. The player's aim through each must defeat the "Knights of the Key" found in each world, then unlock the door to the room containing the Guardian of Passage, in order to reach the next world. Objects encountered include treasure chests, traps and food, as well as many hostile creatures. The price, scheduled for release for play on Atom ST, Amiga and IBMPC computers early in 1992, is now ready for the Atom XL and can be ordered directly for £19.95."

Arcadia Software
P.O. Box 6223, Everdell Station
New York, NY 10431-1223

S 16 Subscription Rates

Annual (4 issues)	
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elsewhere (incl)	£9.00
elsewhere (excl)	£16.00

S 16 Commercial Advertisement Rates

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Half page	£25.00
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Phone (0332) 677893 for details

Show Reviews

**Vibrations-Uncles and 8-Bit Ponies:
Auguries of A Lost Soul At the WAACE Fest
By Ben Poehland (The 8-Bit Alchemist)**

Barley's "Vibrates-Uncle"

It takes a long time to become an Alchemist. A good one like me, at least. Following apprenticeship to Avicenna and Aristotle, I went to England to spend a century with Merle and roamed out my alchemical education under the tutelage of Thomas Hardy. These were all weird dudes, but Hardy was the weirdest. kept telling me to stop thinking and listen to my bones.

Bones, he believed contained amorphous regions capable of detecting odd-wonderful signals the other senses don't perceive. He called them "vibrates-uncles" (VY budy). The bones fade a strength to decipher these signals as their interpretation is best accomplished while the other physical senses are in some manner inhibited. Bone signals manifest as vague sense of discomfort throughout the body, an uncomfortable feeling that something is an inherent familiar civilization is wrong. Things don't fit, messages are obscured, connections are resisted, materials are obtuse, and *Weather is the order of the day*.

There is a metaphysical process involving sensory perception of the bones from the senses and cross-referencing it directly to the vibrates-uncles. Hardy preached it was possible to "listen" directly to your environment and detect what's really going on. He said I had the best set of vibrates-uncles he'd ever seen but gave me no methods, grade B interpretation, because I was busy and kept ignoring the signals. I still regard these stupid uncle things as something pleasant. They bug the hell out of me and don't go away and I finally sit down and sift the signals. It's only been during the past century or so that I discovered writing about any of this as to my vibrates-uncles. Which accounts for the difficulty I'm experiencing in measuring my attendance at the recent WAACE Fest.

Ignoring the Bones

I came away from last year's WAACE Fest feeling downright cheerful and had every reason to think this year would be even better. Over the past year I've met perhaps a hundred people whom I know

only as a signature on paper, a co-sponsor on a newsletter, or voice on the phone. The prospect of getting together with these folks, to simply eat dinner in the same room, was very nice at first. Then one, some new old acquaintance from last year, not to mention hobnobbing with the crew at Carrot Noon. Has I had stuff to trade in the marketplace along with the laundry list of goods I wanted to buy.

I planned my trip in advance, taking advantage of leisure time in the previous year. This year's Fest was a week later than last year's, which meant it would be well-nigh impossible for me to meet our Portlander's double for it by material in the November issue. In the last week of September I headed down to hang out "Segmenting the Beauty Queen" plus assemble the other 8-bit article for November, the whole mess was delivered to Post in G.Dine by Oct. 7. I should have functioned with that old piece written, but instead I felt queasy.

At work, the week prior to the Fest was stressful, culminating in a marathon meeting (where I made several presentations to various corporate bigwigs) the day before I left for WAACE. All that work, the questions grew. But I was busy-eating-sleeping packing up stuff for the Fest and planning my agenda. I had no time for vague forebodings and wrote it off as a combination of stress and guilt for not answering my magazine-related mail.

WAACE At Last

Last year the weather in Reno, Virginia was likehell: a classic Indian Summer weekend. Not in this year. I started out from Pennsylvania in a cold, rain-soaked after finally getting myself with some pills. Driving was treacherous, with a slippery coating of wet pavement lathered on some roads. To comb my waywardness to the dry weather I listened to the Senate's "Judge Thomas Sexual Harassment Hearings" all the way to Virginia. Five hours later I arrived at the hotel totally numbed but still annoyed. The weather in Virginia was no better than it was in Pennsylvania. Then there was a puff of check-in that felt as ready as clean and

such.

I started feeling a little better when I saw WAACE mailing piece right outside the early arrivals and was able to get my registration signed up the night before the Fest officially opened. I don't think they did that last year. Whoever at WAACE was responsible for this deserves a living round of applause. Things improved even more when I encountered Aphelias who not only lost WAACE sponsored travel later that evening. The date price of the evening was when I met two Ken Waters and his wife and Yoni Smith, of the Synthesizer ACE, both of whom had recently contributed to our last Carrot Noon. The four of us enjoyed a pleasant dinner, after which I attended the WAACE dinner. The main topic of conversation there centered around the Judge Thomas/ Anita Hill thing (ugh!) Joe Waters wandered in, looking like he'd had a long day. I apologized for not covering the Fest in the November issue, but was relieved when he expressed promise for my posting my material in early. Perhaps finally not, but not before I'd done serious damage to the WAACE board badge.

I left eating that night on a bus of adrenaline-pumping anticipation and slight related melancholia. I didn't sleep well. Several times I woke with a vague sense something was wrong. I figured it was just the two amuck.

First Day

Following a quick breakfast I checked into the Carrot Noon booth in the reader room to my fellow Joe and Joyce and picked up my 8-bit badge. The Fest badge's officially opened then, and many readers were still making up. Consequently I missed seeing who-all was there. It was the first of many missed connections that weekend.

I headed upstairs to my stuff which was in the swap room. On the elevator I saw Paul Pina who informed me the swap room was already full. I was dumfounded. How could that be? The Fest wasn't officially open yet. Some kind of fiasco, I never got the details.

Undaunted, I retrieved my stuff and headed my way into the swap room. It was

amiable. The Fiat was barely 10 minutes old, and the room was a madhouse. Arms were flailing, hands clacking money and various other goods waving about in such profusion you couldn't tell which arms belonged to which bodies. People dragging chairs up the door collided with those leaving their sit. The background roar was continuous, you had to shout to make yourself heard. The more people shouted, the louder the roar became. I left my chair along a side wall and sought space on a table. I wasn't gone five seconds before the herd was clanking my carcase.

I decided to leave my water from the floor. I then discovered I wasn't supposed to do that. But that was universal. I drove considerably accurately using up one of Super Video powered by a Squared Queen. People wanted to know how tall I was. I like to make things big in life. That only added the video monitor used in the demo, but in the process created a number of people to the Current Notes booth with an intention to buy Jon's back issues and take out subscriptions. Many people came by just to shake my hand, so who else. Added to my usual way, and thank me for keeping it but also in CN.

I never saw Jack. Late in the day my voice grew only some kind and said I had no more accepted water. Ron blundered off to the AUD came by and made off with a hundred pounds of AC fan regulators. Another fellow wanted my autograph, but I declined, as that isn't my style. Jim Godfrey gave me some chip data and demonstrated we had discussed some words earlier. I gave him a sample of my magazine's memory as a souvenir. I went on all day like that without tiring. I wore off layers of skin shaking hands with people. And making change.

When it was over I staggered into the lobby where, as you can see, John Baran who always seemed to be everywhere. I commented how exhausted I was at the level of activity in the swap room being double or triple what I was last year. (Several times the firm monitors monitored across the room.) His response seemed obvious: "What that tells me is that the market has completed upon itself." I wasn't sure which market he was referring to but was too tired to care.

The Banquet

I dropped out for a while, then found coat and sat for the WAACE banquet. I was glad to decompress in the company of my Syncom, ACE friends, Ken and Vern. These banquets tend to be somewhat dull affairs, and I had just what I wanted. It

was not to be.

I won't exaggerate the social drinks of the scores of alcoholic beverages occurring at one of the other tables that evening, which at times was sufficiently boisterous to disrupt private conversations at my own table. I can only hope the subsequent embarrassment suffered by the person who initiated the banquet with the goal of embarrassing people with the goal of embarrassing their outlook on standards of public conduct. Needless to say, my sense of discomfort related with a vengeance. The vibrant action fairly occurred, "Man, you don't belong here!" It was all I could do to stifle the urge to bolt and run.

Joe Watson stood up and announced Dave Troy to the recipients of CN's Author of the Year Award, which was Dave "Anomaly" by surprise. He gathered himself together for a moment at the podium, ignoring the awkward nature of how surprised he was. Then Dave did a weird thing: he shot a glance at me and said, "I thought the award would go to Ben Probst!" I wasn't ready for that. The vibrant action was screaming again. It was Number Six of The Ten Most Worst Moments Of My Life.

Late that evening there was another mixer. The party spilled out into the hallway, as the room had grown stuffy. Then I discovered Joe Watson and began expressing some concerns about my column, the conflicting roles of editor and columnist. During the conversation I was determined to discover how things from mine were Joe's views of what as editor should be. Joe had just dropped a bombshell: "Well, Current Notes probably does need a little more way" when our conversation was rudely interrupted by two newly drafted who demanded his assistance in a discussion of Washington politics (Judge Thomas again). I hung around awhile hoping that would run out of steam and could explain Joe's comment further. But I was so much for two guys running far out on high-octane ethanol. Eventually I drifted back to my room, wondering whether I really knew any of these people and what was I doing here. As I fell asleep, the vibrant action went tearing up to death.

Day Two

First thing Sunday morning I decided to check out the vendor area for awhile before heading back to the swap room. I'd spent so much time talking to people and shaking stuff the day before I hadn't had time to make purchases. I stopped by the

Tost booth and ran a deal with Jennifer for a few software tokens. Dave Troy was running a demo of Proteo Imaging's new ChromaCAD program, and commented he thought it was pure genius. Then I talked to Chuck Leaman at the ICD booth. He had a few PR-C's and other odd 'n' ends, but perhaps were price.

And that was, No Best Information. No Alpha Systems. No Advanced Technology Systems. No all the offerings from L&Y. Nothing. Zip. I got queasy again. I wandered aimlessly through the vendor area, past ST booths hearing out-of-hand names. I was a lost soul, a stranger in a strange land. The boss agains me, in a way, flooding my brain with a thought that was why the equipment was overwhelmed the previous day. It wouldn't have taken an E-bit enthusiast more than a minute to realize the vendor area offered nothing of substance, so they all headed for the swap room. This was a segregated Fair, and I was in the wrong place. I wandered back to the swap room to discover a stark contrast among the other lost souls.

On the way, I saw Ben Bell and Patric Rayle of Atari Interface Magazine who gave me along in the Atari Explorer booth to introduce me to John Janachy. John said Explorers would go to seven issues next year and promised to address the situation from last February when the last E-bit issue still available from Atari was "unofficially" canceled. A hollow promise, considering Atari is dumping the E bit. I saw an E-bit article in the issues of Explorers on display at the booth and wondered who that fellow was trying to kid. But Bell Rayle smirk a warning, more cautious than when he declared AIM intended to support E-bits as long as there was any response at all. He declined to say they were dropping E-bit monthly data at a rate of 50:100 compared to ST digits, which I thought a very credible figure.

In the swap room I sold a few more items, purchased a couple more tokens and briefly dined Super Video and the Squared Queen again. I was greatly cheered to see Merv Seeman of Proteo Imaging who dropped by to chat. He showed me shaded model prints from ChromaCAD that looked great. But the vibrant action distracted a bit, and, about later on to his conversation. People thought I was a dancer for writing such a fabulous program for a worthless computer. (No, I wasn't the only one having a strange weekend.) As he departed, I wondered if really of the world

change the name of his company to "Panas Software." The map room was dead by 4:00PM, so I picked up the remains of my stuff and put it in a box when someone offered to mail it for me. I never made it.

The Brade Encounter

In the lobby I crossed paths with Bob Brade who was leaving the Post. We passed for a moment and eyed each other like two ragged cats. Then he said, "You know, we have a lot much chance to talk." "Oh, what's that?" I ventured. "I wasn't gonna see much of the Post anyway," he followed him to his room.

We began a chat which lasted the better part of an hour and ended down in the vendor area where men were demonstrating the booth. Following a discussion that cleared up a number of somewhat personal issues, Bob brought me up to date on various circumstances surrounding the upcoming Chicago Post. He confirmed Alan had received all some 8-bit stuff over the summer but claimed it was mostly low-grade junk—3800 game carts, acoustic modems, etc. Alan said that the "good stuff"—mostly software—will be hard.

I pressed him for information on the volume of this material. He indicated the space of a very large room, with an estimated weight on the order of perhaps several tons, a lot of stuff. How much would it cost, Alan, to ship that stuff—or a portion of it—in Chicago? A lot of money, according to Bob, more than Alan could afford to spend unless there were realistic prospects of selling a lot.

And these prospects were poor. Despite drastic reductions in booth prices, as of the week of WAACE only four 8-bit developers/vendors had signed up for the Chicago Post. (Now, as of the week of Nov. 3, this number had increased to six.) I was appalled. Over the summer I had compiled the names of 36 8-bit vendors/developers in Bob's request for WAACE to act as an evaluation jury. I figured maybe 12 would sign up. But the response was evasive as he sat there spinning out alternative ideas for Chicago, for while I wasn't sure if he was talking to me or talking to himself. Maybe have the 8-bit developers hold "conferences" (like a series of scheduled demos), or sell off the inventory without distribution like ATV or R&C and/or have the entire 8-bit meet at Chicago with a giant wrap room.

The thought of the Chicago show turning into another scene like I'd witnessed at WAACE was utterly demoralizing. I shared with Bob some

frustration I've experienced over the past year trying to get the developer/vendor community to advertise and agree to a common subscription to *Circuit News*. After exchanging ideas in this vein at some length, it was apparent to both of us that our frustrations were mutual. Good lord, I thought, Now I'm agreeing with The Man From Acan! Whatplace was that? The obvious answer was having a field day.

The 8-bit vendor community has fallen below the critical mass required to hold it together as a cohesive entity. There are still vendors and developers, and some new products are being introduced. But their numbers are low and dwindling, fragments still glowing on the periphery of an explosion long given cold. They haven't attempted to compensate or overtake the market by means of more aggressive advertising or assistance at shows. Most bewildering is the fact that outside (Bob and I have both encountered, whereas some vendors don't seem to care whether they sell product or not. In the end, we consistently stand at each other and stare. There was nothing left to say.

I made plans to do what was my last full-day visit to the 8-bit community. I was looking at prospects and needed a complete status of my Post experience with others who shared my interests, implications for the future of the 8-bit community were looming ominous. That all went on the window when I showed up to the appointed hour and found we had been joined by a fourth party, Mike Vaccaro of Double Click Software, who hadly contacted the other two companies. Mike offered his own interesting perspective on what was going on and the recent anti-pricey visit by WAACE. But I had my own agenda for this evening, and a 8-bit include software poster or save reviews of products for the ST. The growing sense of alarm was beginning to feel for the future of the 8-bit was unwelcome that night. I returned from dinner greatly frustrated, feeling once again I had ended up somewhere I didn't belong. The notion of sleep brought welcome relief from the recurrent nightmare of my forum.

Homebound-Bound Pariah

I checked on Monday morning after a brief exchange with John Rames on the great failure of 8-bit representation at the Post. On the way home the volume-until-then finally struck, leaving me in a numb, reflective mood.

I wondered why there wasn't more 8-bit support from within the ranks of WAACE itself. During 1990 there were a

number of years of CH bearing full-page ads for the NCV/AT&T 8-bit PD library, which was undergoing a thorough reorganization. But in 1991 that support seemed to have been dropped, and only one small ad for the PD library has appeared. That ad was placed at my request, and getting it approved by NCV/AT&T was about as much for as a wisp of smoke, little work before the Post, several WAACE organizers noted me if I would do a demo or someone or whatever to attract some 8-bit interest. Being at that time heavily engaged in preparation for the November issue of CH I declined (though I ended up running a computer demo in the wrap room anyway). But the very fact that WAACE participants were turning to me rather than to their own 8-bit colleagues—for 8-bit support in the Post was disturbing. Especially considering as how I'm an outsider as far as I

WAACE concerned. Their honorary memberships at the Symposium (Banks, Reed) and CHAUS, but not WAACE.

The issue of being more low-keyed over everything. Last year 50% of the traffic at the vendor area was 8-bit. This year, maybe 2%. To be sure, the proportion that occurred at WAACE was a spontaneous event caused by the gross withdrawal of ST to 8-bit representation at the vendor area. But the Chicago Post is claimed to be segregated from the beginning. The origins of this are again economic, as half-price wrapped-down booths were offered to the 8-bit developers as incentives to make an appearance.

The merged the ST vendors, as the 8-bit thing as being moved to a separate area where the 8-biters can segregate themselves, however, the community gets divided out, just economically but socially as well. ST fans have made the vendor area while 8-bit Pariahs are banished to two wrap rooms, or corridors, or whatever. Bob Brade chooses to call it, if the 8-bit vendors/developers allow themselves to be treated like second-class citizens who won't pay their own way, realize that the membership was being an individual like CHAUS, when they don't show up at all, it's got plain pathos.

Trapped between the two forces of dwindling vendor support and uncertainty over the future of 8-bit support at WAACE and *Circuit News*, the Acheveret-com-Pariah is taking a long hard look at the future.

Postscript

On November 3, 1991, my home was damaged by fire (likely arson) in the chimney ignited and/or misused wall. Not only did I escape the blaze unharmed, I brought with a garden hose before the fire department arrived and managed to save most of the structure. I was extremely lucky. Despite my personal possessions were intact, and none of my computer equipment was damaged. Even so, preliminary estimates of the repair bill are in the range of \$50,000. My insurance company is treating me well, and I'm confident that the conclusion of my existence will eventually be restored.

On November 4, I contacted Apple. When I let them know I would be unable to fulfill my commitments as I, but later of the situation as after the December issue I wish to make a clear that my resignation is due solely to the changes in my personal circumstances wrought by the fire, and not by any events prior to Nov. 3. I have no idea when The Aldenist will again grace these pages, if at all.

All the projects and projects I had in the works are indefinitely suspended, my plans to attend the Chicago Fest are cancelled. I'm presently laboring under

great difficulty to get on the 5th material for this issue. Despite my reconstruction of the situation as after the December issue of November, after which time I'll only answer the most critical point made. I'll try to maintain a presence on INTERNET and G News as long as possible.

I wish to thank the many people who contacted, letters, and E-mail expressing their concern and support. I can't answer these personally, but I take great comfort knowing there are so many people out there caring for me. I was grateful for the many kind-hearted assistance, though fortunately I really don't need it. Except for someone to take over as 5th issue...

As for the fact that I will be my last article for a very long time, I'll leave you with the thoughts that are apparent to my mind. Beginning 1992 the Alden 5th issue community will be a community of orphans, orphaned by the very company that gave us the machine we still cherish. If we are to survive as a viable entity, we need to grow up and stand independent of Alden Corporation and the SEFTY community. We need our own forum, something to replace ANTC, that will serve as a primary channel for the 5th

community to focus its own/develop/ vendor resources free of the overwhelming influence of the ST market. Our vendor community needs to abandon its last best interests and pursue the market more aggressively, with great media advertising, distribution of product catalogs, and appearance at shows. Our programming community needs to develop its own/develop/ vendor of software and money within and produce a wide range of novel user-oriented applications software such as the Commodore/Apple communities enjoy. It is the normal users who will keep our machine alive, and programs written for the numerous pleasure of other programmers just won't cut it any more. Read now these last words of The Aldenist, that we may not ourselves from oblivion.

Good-bye everyone, and God bless.

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Report from the Chicago Computerfest by Jeff Pomer

Not having been to one of these shows before, I was amazed when more than 200 people were lined up at the gate at the opening (10 am Saturday). We 5thers had our computers with us (if I remember). Activity there was pretty good, exceeding what I had expected. I found over 2400 eventually showed up for all areas, both days. Here's what I remembered:

Alden was reportedly going to "close out the warehouse" of 16 in the afternoon at that show. The really juicy stuff (old 1450's or other rarities) was stunning, but some good bargains were to be had. About 10 2120's were sold up at the first hour or two for \$10 each. Several dozen 2025's (without power supply) were sold at \$25. Some other packages (Alden Chemistry Lab, Light Lab, Viscate) were sold for \$10 each. A bunch of light pens were for sale, and someone carried some of them didn't work. The LCACS booth drew steady traffic each of them. Near the end of the show on Sunday, the remaining working pens were on sale for \$2.50 each (I got mine).

Bob Pell and Chris Freeman were there, representing CS3. They had a bare-faced Black Box connected to a 1450's,

and were demonstrating acceptability. I hear they sold a fair number of 2025 dual disk upgrades, which provide a 3 1/2" disk drive in addition to the original 5 1/4" drive. They also had a lot of other stuff on hand (I remember "The PLE", and the Technics 44 column wind printer). I loaded my newest COLBY/STW program onto hard disk, and watched it move in stock 30 seconds to the 34 COLBY/STW image that my 2025 (in single density) took over 30 seconds. Bob said he made enough sales to cover his expenses, and enjoyed the show.

Chuck Spennman was there representing DataQue. He was selling Translape (adapter for IBM keyboards to 5th Alden), and various upgrades in his Turbo-516 line. He also did a brief business in 1.25x cartridge writers throughout the show, and handed out many down copies of Alden's magazine. Chuck's collection was on Saturday or the focus of the 5th computer, where he introduced his plans for the 1800LE and 1800EC models.

The 5th people showed up on the 5th even Saturday morning, and disappeared to the 16th even after only three or four

hours. Last Sunday they managed a "bore-out" of the remaining stuff. They had a few 1450's offered at \$199 or \$249 depending on RAM (which I heard did not sell), and a few copies of SpartaDOS 3.2 and continuation set. We were 2025's (old 1450's).

A distributor I hadn't heard of by the name of K O Distributors was showing two new games and a point program "Prod" (or maybe "Carnival Prod") was one of them, which according to play a little like a Mario Bros. game (you guide the carnival around the jumps from place to place, throwing rocks at enemies, etc.). "Museum Shark" was pumping, climbing, shooting game, where you seem to be infiltrating some high-tech installation. Both games seemed to keep the kids who visited our booth interested. I checked the games on my unmodified 4th 800 and both loaded and worked. He was also demonstrating (by videotape) a point program called LocalPrint. This was the thing some drilling pattern which he claimed were converted from Amiga pictures files (by a program not available through him) and loaded up by his program. We searched, and a support

in file format is compatible with the .LRC format that my APACVIEW creates. Note that Eos of Post runs only on a 640 XL or XL system. All programs were written by a couple of programmers either in Germany or in the Netherlands, for which K.O. is the U.S. distributor. Sales seemed to be pretty good there.

LJK (of Data Perfect/Laser Perfect fame) was there, showing a Video Ticker program. It was good (somebody asked me: LJK still showing up, but I'm afraid his sales were slow).

LGACE and one or two other clubs showed up, selling old stock of commercial programs, and libraries of PD disks. More Wordprocessing was also selling old stock of commercial 8 bit programs.

I was there, showing the demo of the "Maze of Apollon" game (which is not finished). I had took sales of all my APAC and COLLEXTM graphics software etc. Happily, a good many people recognized my name and my product. I of course tried to show off the best images from my collection of GEF, Amiga, and ST/Geiger pictures by taking the "color" and "faster" from people who'd discovered such pictures from a slow 8-bit machine.

A high point of the show was when a gentleman who runs a computer and electronics store in Akron, Ohio showed up with his digital camera (a Canon Reflex). He would walk around and snap photos of us with then, then pop it open to show this little postage stamp-sized bit holds 50 pictures. Then he would connect a cable from it to one of our monitors and show us any or all of the pictures with remarkable speed. The unexpected possibility, with occurrence of limited colour resolution. He said he sold them for \$475, and software for other computers could convert these to GIF and let you touch up the pictures. I'm still wondering if he's going to be able to find us, so we can receive our pictures somehow!

The 16-bit area was much larger, and quite a bit busier. I'll leave the reporting on that area to another column. The Lynx and ST game area was impressive, with something like 50 ST's set up for playing *Wish Me*.

I apologise to anyone I forgot to mention, as the show seemed large to a whitened for me. I was glad to finally meet several of the users and developers who have been in contact with me over the last few years. I'm looking forward to the next show I can attend.

8:16 Back Issue Service

Issue 12 £1.50 including P&P (Overseas £2.25)
Includes PACDEM0 (demo) a look at PLAS, Disk Games & The Device Control Block, Turbo-Info part 5, Desktop 500 Review

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Please make cheques or postal orders payable to The 8:16AUG

Wanted - Articles for future issues of 8:16

We are very short of articles and programs for future issues of 8:16. Please help us to help you by submitting any articles on any computer related subject you may be interested in. Subscription increased by TWO for each of your articles published.

Software Roundup

VCS

Only one title, so far, goes VCS with one game console plus a 32 game cartridge, price £39.99

So that's it, the machine was nice, so more new titles for the VCS from Atari. All there is left for me to do up, "goodbye and may be 14 years of gaming history rest in peace".

There are some good titles on this cartridge, and when else can you get a gaming machine plus 32 games for the price of one Sega or Nintendo game?

Pro 7800

All sales from former Acorn version, distributed by Data LTD

Baseball

Screens shots look very good
Double Dragons Arcade hit
F14-Hornet Flight and fight
Rampage Much better on this machine

Shase Boarder

..... Better than VCS version
Title Match Wrestling
..... Good fun for two
Thomas More flying and fighting

AD should be priced around £12.99

Jaguar

Atari began, as we speak, work on the Jaguar 64-bit games. Atari may have banned the VCS, but the new history chapter starts sooner than you think.

Lynx

Expect to see these software titles in your shop-ops now or pretty soon.

720

Baseboard starts
Awesome Golf Already in the shops
Basketball Convenience from 7800
Duty Larry
Platform action, looks very good
Hyperborea Point action game?

Lynx Games Play poker, black jack, also machine and more
Ninja Gaden III: The Ancient Ship Of Doom Whatever happened to N.G.II?
Pa Fighter Another Tengen arcade hit, digitized graphics

Fun-din Tengen coin-up
Scaryd Dog
..... Expensive from 7800 version

The Overlord: Storm Over Dams First real RPG on the Lynx
World Class Soccer The Lynx needs a good football game

Information from 8084 by kind of permission.

So that's a for now, just don't go round complaining that there is not enough software available for the Lynx, and remember there may be more software out on the "Game Day" (your word), but 99% of it is under subbuddi!

Compiled by ..
Thomas Holzer

BaPAUG News - Development SIG

Hardware

The BaPAUG development SIG has developed hardware for the following projects.

- (1) High quality 16-bit sound sampler.
- (2) Mega ST multi v/c card.
- (3) Cartridge port multi v/c interface.
- (4) Video digitiser (SIG a £12.00/130 p.p.p.)

Additionally we have started work on a multi purpose DMA interface. Other hardware projects we wish to develop are

- (1) Enabling machines interface using the RS232 port to connect to Brother linking machines fitted with the Brother-computer serial interface for ST and 8-bit machines.
- (2) Graphics tablet interface.
- (3) Direct to SCSI disk version of the 16-bit sound sampler.
- (4) Colour version of the video digitiser with protocols.

Software

Application software has been written for using the Mega ST multi v/c card to control 16 supper motors for movie

camera driven by electronic motion control. The software allows movement profiles to be created and played back at a variety of frame rates from 0.5 Frames Per Second to 48 FPS. A commercial version of this software called CAMMO ST PROFESSIONAL is available for universities and TV commercial production. Details are available from the ST Editor.

Software resources have been developed to capture images from the video digitiser and save them in IM format for use by the PD ASM program. We wish to expand the capabilities of the software to support other graphics formats, differing etc but we don't have enough time. Does anyone want to get involved?

The sound sampler hardware needs a couple of filters adding to make it complete. At the moment the software samples at 48KHz (16-bit) so that is 56 Kbytes per second. It soon fills up memory so we need to add data compression to allow for longer samples. Our intention was to use the forthcoming DMA v/c card to allow samples to be recorded direct to disk. Is anyone interested getting involved with writing some software routines to perform sample

compression or manipulation etc?

The cartridge port v/c interface provides 8-on input and output ports for controlling delays, LEDs etc. We use this to talk to the video digitiser. The software for this port is very simple. Can you think of a good use for this interface?

If you would like a more detailed description of any of the development SIG's projects then why not contact us now? We will be including descriptions of existing projects in future issues of B16. Alternatively, if you have any projects, ideas or ST/TT that you'd like to share, then drop the ST file a line at the address at the front of the newsletter.

Technical Information

Technical details of the 8-bit and ST are available from the Hardware SIG. We have members who have experience with developing projects for the Atari machines who would be only too pleased to share their knowledge with anyone needing help. We don't know everything but we'll try to help out.

Prepared by ...
Paul Brookes

Music Scene : Roland SC55

The latest 'black box' MIDI module from Roland, the Sound Canvas SC55, is likely to be a success, providing a wide variety of high quality musical instrument sounds, several complete drum kits, OS compatibility, built in digital effects and even a remote control! Read on or you'll never know what you missed.

Opening the box...

Roland have provided all of the accessories needed to both the Sound Canvas, tie to an amplifier and a MIDI keyboard or computer in case as it is unpacked. In the box the following items can be found:

- [1] A quality 9 Volt, 1200 mA, mains adapter with a 2 metre mains lead and a 2 metre 50 lead. This generous combination should allow the SC55 to be placed virtually anywhere. The interesting thing for me is that I don't need another 2m. of mains cable to add to the already abundant 'cables'! At least it is easier to cope with lengths.
- [2] 1 metre MIDI lead. No spaghetti wires here.
- [3] Compact dual signal remote control and 4x AAAA batteries. That allows the user to remotely control the Sound Canvas and the following sequencers, the Sound Brains (not included).
- [4] An 88 page all English language owner's manual, complete with full Roland OS MIDI implementation charts, drum maps etc.
- [5] 1 metre stereo RCA cable, (2 phono plugs to 2 phono plugs).
- [6] 1 RCA socket to 1/4 inch plug adapter.

Connections



MIDI THRU (7 Phono Sockets) MIDI OUT (2 Phono Sockets)
Audio In (7 Phono Sockets) Audio Out (2 Phono Sockets)
DC 9V into - Headphone Socket (3.5mm Stereo)

Controls

Power Standby On (with LED indicator for standby condition)

Battery Without Bank - 36 non-illuminated buttons for voice selection and tailoring of the SC55 sounds - 2 illuminated buttons for preset setup options

Liquid Crystal Display

PART INSTRUMENT



PART

The main 6, back lit display features variable contrast for wide viewing angles. In bar graphs show MIDI activity, whilst dot matrix characters show part number, voice number, voice name, volume, pan, reverb, chorus, key shift and MIDI channel for the currently selected part. The type of bar graph display is adjustable. There are 8 bar display types and 4 types of peak hold to choose from.

The Owner's Manual - Setting Up

Excellent diagrams and text describe without confusion, exactly how to connect up the Sound Canvas to a computer, keyboard, sequencer or even a CD-ROM MIDI decoder (which we haven't seen too many of in the UK yet). Audio outputs (2 RCA phono sockets) and inputs (2 RCA phono sockets) are illustrated with example connections. The scope are very useful if you already have a keyboard or module and you don't own a mixer, or they allow the external audio signals from the other unit to be mixed with that of the SC55, so only one set of connections to the amplifier is required. In case you are wondering, there is no facility to add Reverb and Chorus to the audio inputs, only the SC55 internal sounds. If you don't have a suitable amplifier or hi-fi available then you can connect a pair of headphones to the Sound Canvas via the 3.5mm stereo jack socket provided on the front of the unit, directly below the volume control.

Reverb and Chorus

There are 8 types of Reverb available and 4 types of chorus. The settings chosen apply to all parts. However, if no reverb or chorus is required for a particular part, the reverb and chorus buttons can be used to set the level of the effects required for each individual part. This means that if you want one part to have plenty of reverb, you must choose a master setting with a large reverb effect. All other parts can have their reverb reduced. The same applies for chorus effects.

Reverb types are: Room 1-3, Hall 4-6, Plate, Delay, Flanging Delay. Chorus types are: Chorus 1-4, Feedback chorus, Flanger, Short Delay, Stereo delay with feedback.

Controller Ranges

bend range, modulation depth, key range, velocity sensitivity depth and aftertouch can all be pre-set and stored by the sound canvas. More mode can be set for any part (except the drums) if required.

Polyphony and Partial Reserve

The SC55 can play as many as 34 notes simultaneously. However, like most MIDI instruments, the actual number depends on the sounds being used. Why? Well some sounds use many intervals of voices than others. The SC55 has 32 instruments that require 2 voices to operate. If you use only these instruments as your component you would only be able to play 17 notes simultaneously, and 24. Most of these two voice instruments are bright, rich sounds so it is unlikely that most users would call for more than two of them to be used at once. Examples of two voice instruments are: Flunky-tonk piano, Bandoneon, Orchestral hit, Spanish Harp 1 & 2, Fantasy, Bowed Glass, Metal Pad, Halo Pad, Golden Brightness. Get the idea?

Instrument list

Something I really like to know before buying a module is what sounds are built in and how good are they? Well for those of you like me, here is the complete list of sound canvas capital instruments.



PIANO	Piano1, Piano2, Piano3, Heavy-weight, Electric1, Electric2, Harpsichord, Clavichord
PERCUSSION	Cymbals, Glockenspiel, Maraca Box, Vibraphone, Maracas, Xylophone, Tubular-bell, Snare
ORGAN	Organs1, Organs2, Organs3, Church Organ1, Reed Organ, French Accordion, Harmonium, Bandoneon
OUTR	Nylon string, Steel string, Jazz, Chian, Mandol, Upright-bass, Distortion, Guitar Harmonium
BAJO	Acoustic, Fagotated, Pickled, Pedal-bass, Slap1, Slap2, Synth1, Synth2
ORCHESTRA	Violin, Viola, Cello, Contrabass, Timpani Strings, Piccolo Strings, Harp, Trombone
ENSEMBLE	Strings, Slow Strings, Synth Strings1, Synth Strings2, Choir Aahs, Voice Dohs, SynVox, Orchestral Hit
BRASS	Trumpet, Trombone, Tuba, Muted Trumpet, French Horn, Brass1, Synth Brass1, Synth Brass2
LEAD	Soprano Sax, Alto Sax, Tenor Sax, Baritone Sax, Oboe, English Horn, Bassoon, Clarinet
PIPE	Piccolo, Flute, Recorder, Fan Flute, Bottle Blow, Shobachowsky, Whistle, Cornet
SYNTH LEAD	Square Wave, Saw Wave, Synth Collapsor, Chaffir Lead, Charming, Auto Vox, 3rd-Row Wave, Bass & Lead
SYNTH PAD	Harmonia, Warm Pad, Polyphony, Space Voice, Normal Glass, Metal Pad, Metal Pad, Swamp Pad
SYNTH FX	Ice Rain, Soundburst, Crystal, Atmosphere, Background, Goblins, Echo Drops, Star Storm
ETHNIC	Sitar, Saz, Sitaranga, Koto, Kalamas, Bag Pipe, Fiddle, Sitar
PERCUSSIVE	Tinkle Bell, Apricot, Steel Drums, Wood-Block, Tinkle, Melo Tumb, Synth Drums, Reverse Cymbal
SFX	Guitar Part Noise, P1 Key Click, Sashers, Rod, Telephone1, Helicopter, Applauds, Gun Shot

TABLE 1: Sound Curves Capital Instrument List

Variations

In no specific order, the following list contains more of the sounds:

Detuned Electric Piano 1 & 2, Coupled Harpsichord, Church Bell, Detuned Organ 1 & 2, Church Organ 2, Harmon Accordion, Ukulele, 12 String Guitar, Mandolin, Hawaiian Guitar, Chorus Guitar, Funk Guitar, Feedback Chorus, Guitar Feedback, Synth Bass 1 & 2, Tumblo Koto, Cymbals, Chorus Bass Drums, Melo Tom 2, B34 Tom, Guitar Cut Noise, String Slap, Tumblo, Whistle, Wind, Shamen, Whistle, Dog, Horse, Telephone, Door Creaking, Door, Borealis, Whistle, Car Engine, Car Stop, Car Pass, Car Crash, Street, Train, Jet Plane, Starship, Boat Noise, Laughing, Screaming, Punch, Street Fight, Footstep, Machinegun, Lasergun, Explosion.

Additionally, there is one more set of variations. That is variation 127 and is the MT32 set.

Acoustic Piano 1-3, Electric Piano 1-4, Heavy-weight Piano, Electric Organ 1-4, Pipe Organ 1-3, Accordion, Harpsichord 1-3, Clavichord 1-3, Cello 1-2, Synth Bass 1-4, Synth Bass 1-4, Fantasy, Harmonica, Chorus, Glasses, Soundburst, Atmosphere, Warm Bell, Penny Vex, Bolo Bell, Ice Rain, Snow 1001, Echo Pan, Ice Soda, School Daze, Bellringer, Square Wave, String Basses 1-3, Piccolo Strings, Violon 1-2, Cello 1-2, Contrabass, Harp 1-2, Guitars 1-2, Electric Guitars 1-2, Saz, Acoustic Bass 1-2, Electric Bass 1-2, Slap Bass 1-2, Pedal Bass 1-2, Flute 1-2, Piccolo 1-2, Recorder, Fan Pipes, Sax 1-4, Clarinet 1-2, Oboe, English Horn, Bassoon, Saxophone, Trumpet 1-2, Trombone 1-2, Horns Horn 1-2, Tuba, Brass Basses 1-2, Viola 1-2, Synth, Maracas, Shobachowsky, Tinkle Bell, Xylophone, Maracas, Koto, Sax, Shobachowsky, Tuba 1-2, Borealis, Atmosphere, Trompet, Makelike Tom, Deep Saws, Bassoon Preprocessor 1-2, Tuba, Tuba Run, Cymbal, Contrabass, Triangle, Orchestral Hit, Telephone, Bird Tweet, Gun Noise, Water Bell, Jungle Tom.

Most instruments have a variation but add a different nuance to its sound. The list above shows the variations but doesn't explain how they relate to a particular sound. The structure of the instruments stored in the Sound Curves is:

CAPITAL (8) - VARIATIONS 1-126 - MT32 (127)

For each Capital, there will typically be 1 or 2 variations of the patch. The exceptions are the sound effects which have around variations, between 2 and 9 for each Capital sound. The variation numbers are all tied up with the new GS standard. The idea is to standardize the way sound modules are controlled by MIDI with particular attention paid to assigning standard patch numbers to particular groups of instrumental sounds. GS contains standard instruments, the

Capitals and also instrument variations that make use of device features and allow for future expansion. GS allows for 127 variations of the Capital instrument, although only some of these variations will be present on each GS compatible instrument.

Examples

PC 1 17	Capital 8 Piano Piano 1 Piano Guitar	Variation 8 Detuned EP1 Hawaiian Guitar	Variation 127 (MT32) Piano Piano 2 Synth Bass 3
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SFX

PC 128	Capital 8 Gun shot	Variation 1 Machinegun	Variation 2 Lasergun	Variation 3 Explosion
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GS also includes a multitude of drum and percussion kits as well as guaranteeing at least 34 notes of polyphony and 30 patch levels (limited sound). To be honest, the GS standard will not be fully appreciated until Roland releases more GS instruments which use different variation numbers. For the time being on the SC55, GS is a convenient feature which allows MIDI songs from the public domain that were set up for the MT32 to be played back using variations 127 (MT32 set) and actually heard on the right type of instrument without having to tediously re-arrange all of the patch numbers to make a song sound right.

This entry module compatibility will be the strength of GS if it takes off. For now, however, the MT32 compatibility is very useful for ST work. Many programs and song files support the MT32. GS means you can't edit the Sound Curves's MT32 sounds exactly as you can on a real MT32 as they are samples of sounds on the original instrument.

Custom parameters can be altered, however, for each of the SC55's 48 parts. This effectively a lower sounds to be tailored very slightly to suit a particular style of music. Parameters for example can be made faster or slower by changing the envelope and cut-off frequency. String instruments can benefit from specifying note-bow values for the vibrato options.

Parameters that can be specified/edited for each part are:

Vibrato Rate/Depth/Delay, Cutoff Frequency, Resonance, Attack/Delay/Release Time

If you use a MIDI sequence with the ability to send controller changes and system exclusive messages, then you can alter the sound of each part on the fly, so a solo violin could have a varying vibrato or attack throughout a song. I think that Roland have done this on the two demonstration songs built in to the SC55, which are quite easily the best demonstrations I've ever experienced, being of CD quality. Which brings me to the subject of sound quality.

Sound Quality

Have you ever listened to the Yamaha Clavinova? Well when they first appeared I remember being very impressed with the sound on the uppermost models, but not too enthusiastic about the price! I recently looked up their SC55 as a CLP50, a fairly standard Clavinova and the selected Piano I. What a difference! Piano I is the 'dullest' of the piano settings on the Sound Canvas, yet as my opinion was really better than any of the CLP50's sounds which sounded muffled in comparison. My present friend (the owner of the CLP50) was so impressed she wants to buy one! Piano I was far firmer, providing a sound comparable to her real acoustic grand piano. However, the piano sounds were more disappointing in the other SC55 sounds were exceptional!

Pianos aren't everyone's cup of tea, so I'll consider some of the other instruments and how their sounds on the sound canvas are excellent. The assemblies are a bit weak when compared with other Roland instruments, but the 3 string sections on version 1.23 can be combined quite effectively with a little help from the strings and chords settings!

The Guitar sounds are a mixed bag. The acoustics are generally good, perhaps a bit 'clean'. The electric sound too processed for my liking. Not the stuff Heavy Metal Fans will melt out and buy (could they hear the drum kits...!) The Bass players sound slightly higher, providing very solid sounds with a good deal of variation. Nice with the HALL Reverb settings.

Organ sounds are all good. Cathedral Organ (even may be imitated by the Church Organ sound with the Reverb type set to Hall I) and the reverb level around up (+80). The leady sound (Organ 3) is welcome surprise!

The Pipe sounds are faithful but not quite King MI standard. But actually are a good attempt, but again they don't quite come enough marks to fool anyone.

The Brass sounds provide good variety and when used properly, as a first line (big band sound is preferable. This is demonstrated by the demo using Ray Lapine.

Sound effects will add interest in these lower values. All are excellent except perhaps helicopter, but who's complaining?

Really there are too many sounds to cover here. All I can say is that everyone I know, who has heard the box wants to buy one. Two people already have and the others are eagerly interested, their enthusiasm just dampened by finances! But before I leave you to run down to your local Roland dealer, I must mention one last group of sounds that have been included and act as an afterthought rather.

Drums, drums and more drums

There are 8 different drum kits in the SC55. They offer a great variety. I really don't think I have wanted a sound that isn't included somewhere in these kits. Oh no, I guess its time to type another list!

The kits are organized as variations. There isn't a Capital set as such.

1	9	17	25	33	41	49	57
Standard	Pop	Pop	Pop	Pop	Pop	Pop	Pop

Now I know there are 8 sets listed, but Standard and Pop have the same definitions as I'm not counting them as different sets. Still 8 kits is pretty extensive, but don't get over excited. Each kit has common elements but between 3 and 25 unique elements. The Standard kit comprises the following 40 sounds.

High Q, Snap, Bass Drum, Hi-Hat, Side Stick, Square Click, Hand Clap, High Tom 2, Snare Drum 2, Side Cymbal 1, Close Hi-Hat, High Tom 1, Low Tom 1, Mid Tom 2, Cowbell, Open Hi-Hat, Crash Cymbal 2, Splash Cymbal, Muted Triangle, Chinese Cymbal, Ride Bell, Tambourine, Ride Cymbal 2, Maracas Click, Vibra-Slap, Mute High Conga, Open High Conga, Low Conga, High Tom-Ball, Low Tom-Ball, Open Snare, Mute Snare, Conasna, Bellows Jingle Bell, Shaker, Open Triangle, Open Conga, Mute Conga, Low Wood Block, High Wood Block, Long Clave, Clave, Short Clave, Long Low Whistle, Short High Whistle, Spanish Flute, Scratch Pad, Maracas Bell, Kick Drum 2, Kick Drum, Low Tom 3, Crash Cymbal 1, Pedal Hi-Hat, Low Conga, Mid Tom 1, High Conga, Maracas, Cabasa, Low Aprico, High Aprico

The other kits just have sections replaced by different instruments. All are excellent kits for the majority of home users and professionally able.

Noise

One feature of the original Roland K1 that I disliked, was the audible noise evident in many of the sounds that relied on sampled waveforms. Kawai noted this to a large extent on the K4. Roland had a problem with this on the 1010 sample player, but better filters improved this on the U200. The SC55 isn't the quietest instrument for solo sounds, but most a few sounds are crossfading noise present on individual samples at last. The sample has a subtle when amplification levels are high, and a single piano patch, for example, is being used introduces another piano and the noise remains the same after all noise is removed. However, because there are two paces playing, the perceived noise is less. I'm a bit fussy when it comes to noise on samples and I can live with the SC55 as I suspect the majority of the world can do too.

The quality of the sound canvas was good that a good sound system is required to get the best out of this little box. However the higher quality sound system used, the clearer the sample seems will become! Incidentally, when used with the Clavinova CLP50 + internal speakers, the sound canvas sounded very impressive indeed. Full marks to Yamaha on their internal amplification on the CLP50.

Summary

The Sound Canvas really is a refreshing product. The price tag of around \$400 to \$450 is justified, after all, there are plenty of quality samples and all these drum kits. The built in effects are a very useful addition, adding a significant amount of realism to any sound canvas performance. Roland have really packed this box full of features. I like the two MIDI inputs because I can connect one from the computer and the other from a set of MIDI drum pads or a keyboard. Perhaps one of the only negative points in the size of the buttons and some of the repetition of the design which will date, I imagine, some of the more senior members of the MIDI community on the grounds of 'taking copyright and not re-usable things'. I have enough trouble with the buttons after only a quarter of a century on this planet (Geez my I'm early on the planet!) Try before you buy... BT Ed.



THE ROLAND SOUND CANVAS SC55-D50

NET_News

Compiled by Colin Hunt

Welcome to a new series within E-M. Over the next few issues I will be bringing you my interesting tidbits, gossip and useful information that has appeared on different electronic news networks throughout the world. In most parts this information will have been taken from INFO-ADAMS & INFO-RTAB [16 Digest/Informational L&M and L&M] which is posted to news.Gossip.NET. Occasionally there will be input from other sources. Please let us know what you think and if any times? What topics should I touch?

ST Books

At the end of November last year someone posted a message asking for information on the ST books, in particular he wanted to hear about display quality and from anyone who had used it. One of the replies came from a very unusual source:

Date: 3 Dec 91 17:30:00 GMT
From: banguniar1@orbicon.se (J B Hall)
Re: I guess I'm the best one to answer about current status. I'll have something to say about their quality, too, but I'm a bit biased. We have just done a production proof run of about 80 units; there was a minor "cut-up" (in Billie's phrase), in that a page online that had to change was not done, and it popped a [smug] small indentation on a few (100) boards. This problem has been fixed, and as I write this the units are being prepared for packing. I expect them to be shipped this week.

We have scheduled a run of up to 1000 units starting Dec. 9, shipping about Dec 20. We will continue to work on over the next month.

As to the two eng. there are also units in Germany and France, and both Ben Tronci and Billie Rabback have been using theirs extensively in fact, Ben has taken his all over Europe on his last trip there. We arrived out all of his units and filled on the STbook, as well as keeping his appointments, schedules, phone and address book, etc.

Bill Rabback was the main eng, rather he can Ben has complained about the screen. They both report better lines of over 8 hours (or, as Bill puts it, it "just seems to run forever") using the 80-card battery pack.

The last price, as far as I know, will be \$1200 (on the base unit, with 10Meg hard drive and 1Meg RAM, and an optional battery pack (which has a battery life of about 3 hours) the 80-card pack and AC Adapter/Charger come as a price too \$200 (Don't yell at me about selling this too exp; I argued unsuccessfully against it, but was overruled).

Incidentally, these first units are all 1Meg RAM machines, so will be shipping 4Meg sometime in January.

I know those who have used the unit (Billie in particular), both at Stival and at Trade shows, will also post their impressions.

TTCAD News

Back in October (last year) the following was posted on E&M:

Start: It's asking a little looking for the ST as well as my other machine. When you will see it? Well depending on their resources you should see it when you see the T1040 next year. Otherwise, after Start got over the deal with Cadaver, you have been able to believe what they told you. At least that I have been hearing anyone. I like to see in the last one. It should be very long from the time it released to the public next year. The board developers need to find any bugs in there. :-). (Unfortunately the hard way sometimes.)

This was the first time that word of a T1040, however, more recently as a post related to the Chicago-Compucenter was the following warning info:

Just as the Start people were legal also that said "GHS". The party line was that it probably wasn't what you thought it did, but they wouldn't comment further until Spring.

MultiTOS & TOS 2.06

Also in the Chicago-Compucenter post was the following news about MultiTOS and the TOS 2.06 upgrade:

All discussion of programming techniques around the Apple II/III spread discussion of how they'd work with MultiTOS. Again, no specific news, but a notice that version 1.01.11 would be finished in 1992. The TOS 2.06 upgrade is scheduled to be available "After Christmas", but others suggested that it was running ahead of schedule (my friend fills with words parks at this point. as you, I am sure).

MIINT (MIINT or Not TOS) Problem

There is a lot of conversation about the use of MIINT between users at the moment, some of which is shown below. It is what is MIINT? OK, it's not TOS, in fact it's a multi-tasking operating system/monitor for the ST. Even the desktop/GEM can be run from MIINT. Out of interest, do any of our readers use MIINT? If yes, please let us know what you think. (If you want to try it out, MIINT can be found at the STAGE-Alien Interface Magazine, August 1991 Issue Disk within the SoftPAUX PD Library and costs £2.50.)

The following thread started because someone in Germany needed help:

Date: 12 Dec 91 13:00:28 GMT
Re: [ent. "Unsupp'd [sig. output]" to RIME problem
I have just downloaded RIME 0.01 and

installed it. I have a tip that is coupled with Tasker 2.0 which does some status output via window when running. If I use this program with also, there are no problems if it runs in the foreground but if I use it in the background (using the ALT function of task) I keep get an error message like this:

```
STD: Standard (tty output)for_bar
```

Afterwards, the process of Tasker has the state "STOPPED"

```
ERR! THE KILL IS THIS PTTPT  
(and how can I get around it)
```

Within a few hours, the first response was posted (from within the UK)

```
Date: 12 Dec 01 18:01:01 GMT  
Subject: "Standard (tty output)"-ERR problem
```

And here goes the answer:

Running a program in the background usually means the shell runs the program but does not give it access to the terminal for input or output.

The master of this is that the shell is started when the program attempts to access the screen terminal (STDIN) and it the signal and it stops the program and tells the user what has happened.

To prevent the program from being stopped you would redirect its output (using > & & & &). This file can be any file or any thing greater. If you want to keep a copy of the output you could use a normal disk file on the partition (/u/proc or /u/dev/proc) if that you can use the real device (/u/dev or /u/dev/tty) which is equivalent to abandoning the screen.

Later that day, even more information was posted (direct from Holland)

```
Date: 12 Dec 01 18:11:48 GMT  
Subject: "Standard (tty output)"-ERR problem
```

This is one of the wonderful features DOS only (command), and also has also added a process can also be in the STOPPED state. In it, does not run but can be restarted by sending a SIGCONT to it. It will also continue if you get the process back to the foreground (use "fg"). If you have the shell stopped, with closing it will change the sig code so that processes running in the background will not be started when they receive signal.

The Colour Of Asen

Just some meaningless stuff that was recently posted on IANIS

A few months ago, I met a British bank, Senior Sales Coordinator, and we exchanged business cards. I noticed that his card was multi-colored, in contrast to my German's (purple, green, and other blue) cardstock. The card (blue) had "STERN" in capital letters in letters of different colors, and remembering that the colors refer to the different lines of products that Stern sells. So, in order,

here are the "Colors of Stern" and the products they represent:

A blue	IT computers
T green	IT computers
A orange	Video games (PSP) logs
R red	IT computers
I purple	IT computers

Well, I'm guessing on the orange part of it but I noticed that logs (logs and orange) could be the logs (logs) also be orange? Notice that the logs on the Portfolio are purple.

IT On Ethernet

The following conversation thread is a typical example of how information can be passed by reading electronic mail (email). On 11th December, the following message was posted:

I (would) like to know something about the ethernet-interface of the IT

Several days later, the following response was posted:

The IT does not have an Ethernet interface. The built-in high-speed net-interface is not yet supported by Stern. The Stern interface, I heard,

You can connect an Ethernet interface, but do you have Ethernet? I heard some rumors about expensive interfaces from German vendors, the same vendors which sell (and) ethernet controllers for the Sage-RT.

A couple of days after that, the following was posted:

Speaking of Ethernet, I was on the thread group that has STN (i.e. Ethernet) interfaces are fairly cheap (about \$500 to \$1000) and some (maybe) support this (I have TPI board for the STN) it would be by far the best solution for me.

Even I could be tempted to buy a STN (i.e. Ethernet) interface as I could talk to the PC/Mac network as well, though of course there will be the problem of software compatibility. Now, does anyone know of a network that will allow me to connect my Mac and ST together and share the hard disk drives. Thank I'll get a message and see what response I get?

That just three months off this issue of NST, News. Please remember to let us know what you think. In the meantime, I'll continue to search and pick up anything I think will interest our readers.

Help Wanted

Do you own a Portfolio or DHP Pocket PC?

Yes, then would you like to write a regular column for 8:16? We are looking for someone to write a maximum of two pages per issue (normally one page).

Remember, for a limited period each article published entitles you to TWO free issues.

Choosing a memory upgrade for your Atari ST just got easier!



Over Frontier's Extra RAM **Deluxe** installed in your ST, you get a upgrade to 1MB or 2MB whenever you like. It includes the extra 1MB extra processor and a compatible one day money back offer.

Is your ST always running out of memory? Frontier Software's new Extra RAM **Deluxe** is the easy to fit and simple to upgrade memory expansion that you've been waiting for.

Thousands of ST users have already upgraded their STs to 1MB or 2MB using the original Extra RAM on their homebased offices without having to send their computers away. Now Frontier, makers of the original Extra RAM, introduces their new memory upgrade - The Extra RAM **Deluxe**.

The experience, quality and expertise that went into the best selling Extra RAM has been applied to their new Extra RAM **Deluxe**. The Extra RAM **Deluxe** will upgrade your Atari ST/1M to 1MB then 2V-MB and then 4MB with ease to install 2MB memory cards. Your Mega 1ST can be upgraded to 1MB and then to 4MB. Mega 2STs can be upgraded to the full 4MB. Once the Extra RAM **Deluxe** is installed in your ST, you can choose when to upgrade further - you simply change or add 2MB boards just like the ST. You can even use three 2MB boards if you later upgrade to the ST.

Easy To Fit

Installation of the Extra RAM **Deluxe** module is simple. Following the instructions laid out in our simple to follow manual which is written with the non technical reader in mind, you disconnect your ST/1M or Mega ST, plug the Extra RAM **Deluxe** into two places inside your computer and reassemble it. The whole process takes around 15, hours and most STs will not require any soldering whatsoever.

The Extra RAM **Deluxe** (fixed) MMU chips (containing the 100000) whether they are soldered down or not. If your ST has a soldered down Video Shifter chip or a 101001 type MMU then some soldering will be required. You can do this soldering

yourself or Frontier or your dealer can do it for you for a small extra charge. If your ST has a soldered Video Shifter chip and an MMU which isn't the 100001 type then you can fit the Extra RAM **Deluxe** without any soldering whatsoever. If you need any further explanation of this, contact Frontier direct.

No Need To Stop At 1MB or 2V-MB

Most memory upgrades for the Atari STs will give you a simple upgrade to 1MB for about the same price as the Extra RAM **Deluxe**. Some of these upgrades may be as easy to fit as the Extra RAM **Deluxe**, but they do not allow you to expand your ST further. Once the Extra RAM **Deluxe** is installed in your ST, all you have to do to upgrade further is 2V-MB or 4MB is install extra 2MB memory cards into the empty sockets on the Extra RAM **Deluxe**. This is a very simple process which takes less than 5, hours.

Don't restrict yourself to just 1MB. Make sure that you choose an upgrade, like the Extra RAM **Deluxe**, which can grow with your needs.

Totally Compatible

The extra memory that the Extra RAM **Deluxe** gives your ST is totally compatible with all of your ST programs. The ST's memory controller chip logs in the extra memory and makes it available for your programs. You will automatically get extra memory for DTP, word processing, MIDI, running the Atari Laser printer and everything else that you use your ST for.

Software Included

Each Extra RAM **Deluxe** upgrade is



Designed and Manufactured in the UK. Frontier also manufactures memory upgrades for the Atari ST.

Limited time only best value at £199.00



Frontier Software

supplied with free RAM disk and printer spooler software and a free RAM testing program so that you know with certainty that your installation has worked.

Refundation Guaranteed

The Extra RAM **Deluxe** is applied under Frontier's one day money back offer. If you aren't satisfied with the Extra RAM **Deluxe** for any reason you can return it to the place of purchase within ten days for a full refund (excluding postering, restocking only). The Extra RAM **Deluxe** also carries a full two year's guarantee. The Extra RAM **Deluxe** is designed and manufactured in the U.K. Unlike some ST upgrades, Frontier guarantee that each Extra RAM **Deluxe** comes only based on 2MB memory boards - making your ST and the memory upgrade most reliable both now and in the future.

Prices

Frontier supply the Extra RAM **Deluxe** in four ways:

Now Lower Prices!

- ★ Extra RAM **Deluxe** Unupgraded (without memory) £34.99
- ★ Extra RAM **Deluxe** 1MB upgrades your ST/1M to 1MB then later upgrade your ST/1M to 2V-MB and then 4MB £114.99
- ★ Extra RAM **Deluxe** 2MB upgrades your ST/2V-MB, 100001 to 2V-MB, Mega 1ST to 4MB then later upgrade your ST or Mega 1ST to 4MB £169.99
- ★ Extra RAM **Deluxe** 4MB upgrades your ST/2V-MB, 100001 and Mega 1ST to 4MB £179.99

Please add £5.00 postage and packing to all orders under £120.00. All prices include VAT. Frontier accepts payment by Visa, Access, cheque or postal order. Prices subject to change without notice. Goods subject to availability. Specifications subject to change without notice.



Your Guarantee



Game Reviews

Cultivation & Chromatix.....XL/XE

Ko-Soft (216-99)

Reviewed by Thomas Holzer

Have you ever watched *Ampas* or ST owners playing all these hot games like *Tetris* and *Pac-Man*, wondering if you can ever play these games on your trusty old XL/XE? Well, now you can! But do think that programs such as *Tetris* and *match three* are too common and overused. But please, don't get me wrong, I do like to play the odd thinking game. *Zomp* and *Soko-Rus* spring to mind, they are exceptionally good and represent value and saving power for many happy playing hours.

Cultivation: This game is made a mile off the disk and the aim of the game is to match symbol blocks by pushing them together in the right order to make pairs. If they match correctly, they simply disappear and you advance in the next level once you've cleared the screen. To make matters a bit harder, a clock keeps ticking down so be careful not to hang around and get in a sticky corner. If you do make a wrong move you may reset the disk up to three times by pressing the spacebar, but this doesn't affect the clock, a keeps ticking down. *Cultivation* has 10 levels containing 10 moving each and after that you can begin your own screen with the basic symbols, which is quite fun and easy to use.

The graphics are high-end, meaning black and white only and therefore very clear and clear. A special screen has to go towards the screen, quite a high quality comparison indeed.

Chromatix: Move coloured blocks falling onto a well and match three same coloured blocks together to make one or columns of three or more and make them disappear. Once a stack of unmatched blocks reaches the top of the well the game is over. You use the joystick to move the blocks on the left or right as they fall, and by pushing the stick forward you can flip the colours which is a useful feature. *Chromatix* is a mix of *Tetris* (falling blocks) and *Klax* (match colours) which plays very well indeed. You may change the difficulty level by pressing *options* and the number of colours by pressing *options*. There's no difficulty level not to hard it is still an enjoyable puzzle and should keep you happy for

years to come.

Graphics are up to the usual high standard we expect to see on Atari computers. The soundtrack is a well known tune from the ancient computer I.S. Bach, it is the music from that organ which, it plays throughout the whole game, which I found to be very relaxing (oh yes, I don't smoke organ).

Now and good luck on your Atari? You too!

The software reviewed is available from: Ko-Soft, Frankfurter 34, 54571 Mairland 4, Germany or Gröben International

Ball & Ted's Excellent Adventure

.....Lynx

Atari Corp (229-93)

Reviewed by Thomas Holzer

Here we have the game based on the first film from their two cool kids, *Ball* and *Ted*.

The beautiful babes from medieval England, *Isabella* and *Elizabeth*, have been kidnapped by the bad "grim reaper". Now it is up to *Ball* or *Ted* (or both, as a two player game) to travel through time and find the girls and be most triumphant.

I found the film to be a bit of a disappointment, but this game neither other hand put you well and truly hooked. It is an overhead scrolling adventure type of game but with absolutely no fighting whatsoever, instead you have to play the game to fight off the enemies.

Sound: Good? You do have to listen to a lot of music to reveal hidden phonetic clues in order to find the telephone numbers so that you can travel through time to your little telephone box (Or who needs).

Also, you must save important people on your travels, who give you some points to do. For example, as the first stage of the game you must tell *guyton* (who has lost his staff and asks you to find a fortune. This is essential for solving the clues to get further into the game. You also have to leave messages for yourself in order to come in order to find it in another time some later (or earlier?) during the adventure. Sounds even more weird?

Ball and Ted's Excellent Adventure is not a quick film burning to do. Very much thought has been devoted to make the pictures of time travel into this game. Sometimes you have left yourself a clue in the past time, which you still have to leave

at your present time, but you will have to place a right clue to find it in the future. It is therefore important to search in every time period but watch out for lots of monster-like border boss/bosses/boos.

To sum it all up, *Ball* and *Ted* is an "excellent" adventure without the usual shooting and fighting, it involves a lot of brain power, maybe some frustration at times.

The graphics are spot on, so are the time travelling sequences, and game play is almost smooth, maybe a bit dull at times. In one word it's *excellent* (but's three words).

Robotron 2084.....Lynx

Shadowsoft (229-99)

Reviewed by Thomas Holzer

Ten years ago there was a fun and funny video game that drove people waving their arms and shouting. It was a new two joystick control system that made it possible to shoot *Robotrons* and still move around at the same time. The name of this game? It was *"Robotron 2084"*. Now, ten years later, it makes a comeback on your Lynx and a looks, sounds and almost plays like an arcade game.

As you may have guessed, it is the year 2084 and the people of earth created the ultimate machine: a *Robotron*. One fine sunny day the *Robotrons* decided that man is not good enough any more and all human beings have to be destroyed, so they started to revolt against mankind. It is now up to one man to save the humans, he is a warrior armed with only a laser and guns who that man is?

The game starts on a large playfield filled with *Robotrons*, humans and obstacles. The aim of the game is to destroy the enemies and save the humans before they become "Progs", helpers of the *Robotrons*. This is all there is to it. Sounds easy?

At first it seems to be a bit difficult getting the controls right, remember the coin-up had two joysticks, but as the version you have these information firing modes, one of them will surely suit you.

I found the first mode is option C, which means A button is rotating, fire clockwise and then counter clockwise and after a while of practice you'll be doing some serious blasting.

The graphics and sounds are just up standard and you even get the flashing *Robotron* side screen plus another two extra life screens. An old man may be, but it is a hell of a good one.

Speed



Ralph Griffin presents a personal exploration of the many ways of enhancing your ST's performance using hardware & software.

Speed is sexy..

That is what we are led to believe, but only in so many of us first start speed, after all, who wants to wait all day for a program to load, for the screen to update itself, or for a document to finish finding that long lost address?

Go for a brain transplant!

The brain of a computer is the CPU (Central Processing Unit). The CPU moves data around memory, between memory and the I/O (Input / Output) devices, as well as performing arithmetic and logical operations on data. In most microcomputers, the CPU is a single integrated circuit called a microprocessor. To speed up a microprocessor, the designer must improve four areas:

- (1) Increase the amount of data that can be processed at once.
- (2) Increase the memory the CPU can use.
- (3) Speed up data processing.
- (4) Speed up data manipulation (I/O).

The microprocessor connects to the memory by two groups of wires on the printed circuit board, each known as a bus. One group is responsible for holding the data (the data bus) and the other for determining where in memory the data is to be read from, or written to (the address bus). The rate of a single piece of data that a processor can hold is called a "word". This refers to the amount of data that can be handled in one instant and is measured in bits. A bit is one binary digit either a "0" or a "1" and each bit is a power of 2. Data throughput and hence processor performance, improves with increasing word length since more bits are handled simultaneously.

Word Length	Processors	Example Computers
8 bits	Z80, 6800	Spectrum, BBC Micro
16 bits	68000, 68010	Mac II, Apple IIc, PC XT
32 bits	68020, 68040, T800	Ami TT, PC AT, ATW
64 bits	80386, 80486	

The Z80 and 6800 might not microprocessors have 16-bit address buses and so can use 65,536 bytes of memory (2¹⁶). The 68000 has a 24-bit address bus, making use 16,777,216 bytes (2²⁴). However, the ST's Memory Management Unit (MMU) was designed to address only 4 MB out of the 16 that it is possible to address using the 68000. At the time of the design 4MB was very adequate, but today many power users are finding that a limitation.

Word 32-bit microprocessors like Intel or addressable memory has dramatically increased to 4GB (4,096MB) of RAM (2³²) for the 80386, 68020, and T800. The IBM PCs operating system DOS needs 5MB to be comfortable, but gigabytes cost less money, so 32-bit microprocessors usually have virtual memory addressing. This is a hardware trick to make different parts of the system think each has access to a large amount of memory. In reality, chunks of data are moved out to disk and other chunks loaded from disk slowing some down in disk speeds.

Check that pulse..

All processors rely upon clock signals to synchronize their activities. The faster the clock signal pulses, the faster the processor runs. Clock speeds are measured in MHz. One is one cycle per second so 1MHz is a million cycles per second. The 68000 inside the ST is clocked at 8MHz and that is the Amiga at 7.16MHz. The fastest instructions that a 68000 can perform are executed in four clock cycles. Hence, so (1MHz) 68000 can run two million of its fastest instructions per second (2 MIPS). Many 68000 instructions take more than 4 clock cycles, a multiply needs 73 clocks, so the true rating of a 6MHz 68000 is much less than 2 MIPS.

Motorola have produced several versions of the 68000 including devices running at 16MHz. One of these is employed in the new M680A STE.

High speed RAM chips are necessary to make the most of the higher transfer rates achievable with fast clocks. These are very expensive however, and doctors are required to raise money for a modern microcomputer. Over the years as microprocessor speeds have increased by an order of magnitude (ST 84, 10 times), RAM speeds have only doubled. This means although a processor is capable of high speed it may have to pause to let the RAM catch up. These pauses are referred to as "wait states". PC chips alternate the wait position by constructing a "buffer" of fast but expensive SRAM (static RAM) between the microprocessor and slower, cheaper DRAM (dynamic RAM) which forms the main memory. A cache holds addresses and data of recently accessed memory. Whenever the processor accesses the cache or data, the memory management hardware within the CPU checks to see whether the data is in the cache. If it is, then fast access occurs. Because programs tend to repeat instructions in loops and access small amounts of data frequently, the actual "hit rate" with 128K of SRAM can be as high as 95%, so-cache can be very effective.

Specialist chips have been developed to reduce the work load of the processor, the Motorola 68440, and Intel 80387 for instance provide trigonometric functions, powers, roots and logs. They act as co-processors. A co-processor does not affect the speed at which basic computer functions operate, instead it possesses a capability to reduce the burden of some forms of calculation from the CPU thus leaving the microprocessor to perform a more efficient job. Such calculations are not needed to any great extent in programs such as word-processors, databases and file utilities. However, the Desktop Publishing, Spreadsheet and CAD applications, calculations are of primary importance. Lately it has been possible to fit a processor and co-processor on one chip, the 68440 chip by Intel is an example (ST 84). The co-processor section of this chip has already been widely criticised. Consequently, Intel recently released a version of the 486 without the co-processor.

The 486-10 for M68000 was developed over a decade ago. It has been updated, and enhanced several times. The 68030 and 68040 are the most recent designs. The cost of these high performance CPUs remains substantially higher than that of

the 16MHz 68030. This is why Atari has been reluctant to use them as the ST. Only machines such as the TT can utilize the cost-probably improved by using the 68030.

If you can't wait for Atari to redesign its third internal architecture, what about fitting your own accelerator board? There follows a brief summary of the replacement processors available.

Hypercache has 1K of instruction and data cache. There are two ways of turning the cache on and off, either by using the disk accessory or accelerating on a hardware switch on the Hypercache board. The cache control OS works by tapping a bit in the sound chip which must be connected to the accelerator board. Hypercache also requires a 16MHz input to be taken from one of the bays on the ST's starter chip.

TURBO 16 from Fast Technology is a 16MHz 68030 CPU with a 10K instruction and data cache. Its design is similar to the rest, the old 68030 is removed and replaced with the new CPU board, the 16MHz clock signal has also to be tapped from the ST's starter chip. Hardware and software switches for cache control are available.

Just recently, 4 new accelerators have reached the UK market. These are:

TURBO 20/16, a 16MHz 68030 with enhanced operating system to 68040 but with no cache RAM.

TURBO 16 V2.0, a low power 16MHz 68030 with 32K cache RAM and supplied with HIROFT's TURBO ST software filter.

TURBO 20/20, a 20MHz 68030 with 32K cache RAM, TURBO ST software and a video RAM cache option.

TURBO 30, a 68030 processor available in 40- or 50MHz versions! This board will run a master co-processor at up to 65MHz too. It also supports up to 16 MB of burst mode RAM. However, you might need to tell your car to afford one! Prices start at around £1000 and run to around £2000. All this expense to make your C80 ST run a little faster?

If you can't afford to speed up the processor, look to software and specifically to the public domain, where programs are available that can speed up the ST by completely replacing chunks of the ST's operating system with small program patches installed from floppy. Many of the speed problems are down to the way the ST's operating system was written. Much of it was coded in C, IBM's native language. This has led to some portions of the operating system code running well below peak performance. Micro could have been achieved had the system been written in machine code. Many of the utilities on the PD are actually machine code patches that provide enhancements to the operating system. And for improvements in screen updating, window redraws and scrolling, floppy and hard disk performance, mouse speed and general system maintenance.

Screen handling was improved when Atari started fitting the blitter chip on ST's, but the improvement isn't always as great as it could be because the blitter is mostly allowed to run in hot leg mode when it could mean interrupts not to be served. The normal (idle) mode of using the blitter on the bus also tends to say blitter functions will be interrupted after 64 cycles. And will have to wait until the processor's busy on the bus is complete before a hardware extended Pollbit function can complete. Not all ST's have blitters fitted, you need TOS 1.2 or later to be able to use a blitter and not all of these machines work with a blitter for some reason. Not a worldwide upgrade, even if your machine will accept one. A much better upgrade is to use a software blitter such as Quick ST or Turbo ST. There cost between £15 and £20 depending which version you decide to buy.

The software blitter..

An American chap by the name of Wayne Buckholdt re-wrote several TOS routines running his program Turbo ST. Using Turbo ST, text output, window redraw and scrolling are noticeably speeded up. While Turbo was being sold, shareware programmer Jacob Holmberg was developing his own software blitter, Quick ST. This was available on a Shareware basis. Recently it took a jump in performance and went into the commercial market as QUICK ST V1.0. Because the Turbo and Quick code is more efficient than the C code the result is much faster screen handling.

There are also several ways of improving disk performance. 'Daxter' adjusts the timing interface, whilst reformatting compatible with the ST's disk system. It improves the speed of disk access so that a single scan is read for every revolution of the disk. For hard disk users there are ways of improving the creation and writing of files. Again it is down to the inefficiently programmed File Allocation Mechanism in the ST's operating system. Either FATSFBIOS and TURBODOS. Like software blitters these additional software operating system routines and replace sections of TOS with they are optimized code. Another method disk related utility and popular with hard disk owners is the disk cache. This is a kind of simplified RAM disk which records copies of disk reads and writes to a RAM buffer, so that subsequent requests for the same data, results in information coming from the faster RAM rather than from the disk again. The shareware L-UTILITIES includes a disk cache program which can be configured to cache floppies as well as hard disks. It even supports disk cache caching.

Hard disk drives are, of course, the best answer to the floppy disk speed problem. They provide much faster access to data and remove the need for tedious wait time concerning disk swaps. All disk accesses, however, benefit from the fitting of TOS 1.4 as Atari improved the way files are handled. Hard disk users will notice a considerable speed improvement when using TOS 1.4. Perhaps this is a worthwhile upgrade, costing a modest £60 or so.

You can speed up the acceleration of the mouse, and in a word, running out of mouse-stal space with a couple of ACCURATORS. My favorite is PROMIDRIVE with dual speed action, moves the mouse slowly and as given then process control, moves the mouse fast and the pointer accelerates away... >> >> >>

Memory upgrades can also improve the performance of your humble ST. For floppy users who can't afford a hard disk drive, then a large RAM disk can often make the operation of those programs requiring access to more files than can fit on a single or dual floppy! Try running Timeworks with E-Rupt installed as an accessory on the single disk. However, with a little RAM disk, you can copy the Timesaver files from floppy in the RAM disk and access them at full speed (faster than on a hard drive). Unfortunately you'll need at least 2MB of RAM to do this. STs owners can simply slot in SIMMs (ST/M/MEDIA ST owners will need an adapter board to be able to use SIMMs, such as the one supplied by Cosmos Micros. Other boards can offer the full 4MB for £160, about £90 cheaper than the one last year. Now could be the time to buy as industry sources are predicting price rises this year.

There are many ways to increase the speed of the ST from the cheap to greatly expensive. Which you choose, and with which you really need I'll leave to your own judgement. But one final thought. When you write into the keyboard etc. can operate the computer twice as fast as you can. Not because the signal is a faster CPU when I'm not looking, but because the one touch type and I cannot. Perhaps the fastest upgrade you can buy is a night school course in typing skills!

By Ralph Griffin and Paul Brooker

Turbo - Info

Teacher Info #7: Dual Memory Usage In Applications

Alfred Lord Tennyson: A Study in Victorian Literature (Cambridge, 1967)

This article will present one way to set up a program to run under the TurboC, yet still be compatible with the Atari XL/II operating system. It is assumed that the reader has some knowledge of programming at the assembly language level and is familiar with the previous article #8 (see issue 17 of S 16 or the December '89 issue of AHA). This installment will concentrate on memory management.

Last month, the program fragment presented demonstrated the type and amount of available RAM. There were two significant variables which were set by the program to make later RAM access easier in applications where both standard and expanded RAM may be used.

The first was the three-byte pointer, **BASEPTR**. This pointer is used to indicate where the base of user RAM resides. Since we want to make our appliances work on both the stock 6502 units and the Turbo-016, we must be very careful of user conventions we used. It is very easy to accidentally slip in a 6502 instruction, which would cause a real problem for the 6507

The second variable was a flag called **EXPANDED**. This flag is set to zero to indicate there is no expanded RAM and some negative number if expanded memory does exist. We will modify our month's program just after the label **NO ERROR**, to set **EXP** to **EXPANDED**. This will allow us to check the connections to test what memory is set in our program. Note that **EXP** is already loaded into the accumulator, so all we have to add is the code line: **STA EXPANDED**.

First, we may want to initialize the RAM with the information expected at the default *insertable* map application, let's say we have several tables which need to be maintained. To fall back on Turbo-Calc as a reference, we will need a 128-byte table for the cell widths, and a 194-byte table for the row pointers. Another table will be maintained, to contain the cell data. To simplify indexing, we will keep pointers to the beginning of each of these tables. Well, let's begin.

By Chuck Swinman

(Data.cov)

[illegible]

600XL Video Modification

By Ken Sumrall

Here are instructions on how to add a monitor jack to your 600XL. This jack contains the following signals:

Pin	Signal
1	Composite luminance
2	Ground
3	Audio out
4	Composite video
5	Composite chrominance

The numbering convention for the DIN connector is:



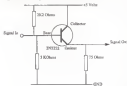
This mod for the 600XL provides every one of these signals except the composite chrominance. (Actually, the 600 and the XL both supply the composite chrominance signal, but the 600XL does not. Adding the composite chrominance signal to an 600XL is a simple mod that was described in ANTIC a few years ago. If you can't find the mod, send me e-mail, and I will try and find it.)

COMPOSITE VIDEO (pin 4).

To add composite video to your 600XL, you need the following parts, which are all available at Radio Shack:

- (1) 2N7222 general purpose transistor
- (1) 2.2K ohm resistor
- (1) 3K ohm resistor
- (1) 75 ohm resistor
- (1) 5 pin DIN female connector

The output is shown below. It is a basic emitter follower circuit. I built this by just soldering the transistor and the transistor together, and did not put this in any kind of circuit board. After you have built this little circuit, you consider the 1in. wire from the right of the RF modulator as you look at it from the front of the computer, another wire that looks like Signal 1a of this circuit. You then connect the Signal Out line to the terminal from the right of the RF modulator, and also connect to pin 4 of the DIN connector. You should be shielded when you connect the Signal Out line to pin 4 of the DIN connector. You can connect



the ground wire to any major ground point on the mother board. I hooked mine to the metal case of the RF modulator. The +5V line is also available on the RF modulator. The 2nd pin from the right of the RF modulator is the +5V power supply for the RF modulator.

COMPOSITE LUMINANCE OUTPUT (pin 1)

To add composite luminance (black and white signal only) to the DIN connector, connect a wire from the emitter of the transistor (pin 4 of the DIN connector). You should be shielded when to keep noise from appearing on the line.

AUDIO OUTPUT (pin 3)

To add audio output to the DIN connector, connect a wire from the 2nd terminal from the left on the RF modulator (pin 3 on the DIN connector).

COMPOSITE CHROMINANCE (pin 5)

I have not found a simple mod to pick up the composite chrominance signal for the DIN connector. I have not looked scrupulously hard, however, since it is possible to use the composite video output as a composite chrominance signal on many monitors. That is how my 600XL is hooked up in my separate composite chrominance/luminance monitor, and it looks great!

GROUND (pin 2)

5 pin connector pin 2 of the DIN connector is the metal base that the RF modulator lives in. However, you should be able to hook this pin up to any major ground point on the motherboard.

I was able to mount the 5 pin DIN connector on the back of my 600XL, between the RF modulator and cartridge slot. It is a slightly tight fit, but you can fit it if you are careful.

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(You may photocopy this form if you wish)

Competition #2

We were so pleased with the number of entries from the first competition that we are going to make it a regular event. So here goes competition number two.

On this page you will find a brief short program listing written in languages available on the Atari 8 line and ST. All you have to do is tell us which language.

We have four main prizes:

- 1st. InterLISP60 from AMTC BASIC XL, from KID
- 2nd. PD Language Collection (DCCM, Link Smalltalk, Park, C, ELAN) and XLISP Using LOGO on the ST book by Martin Soria (Glasgow)

and two \$16 subscriptions to get away.

For those of you who are interested all the programs work and perform the same task in a similar manner. Each program consists of a main routine that defines any variables (if required) and then calls a sub-routine that asks the user to enter two numbers. The sub-routine adds these numbers together, displays them on the screen and returns to the main routine which exits. Rather simple, really?

Listing One BASIC

```

10 REM *** ADDITION ***
20 DIM A,B,C
30 END

40 PROC ADDADD()
50 PRINT "Enter A":
60 A=INPUT$(2)
70 PRINT "Enter B":
80 B=INPUT$(2)
90 C=A+B
100 PRINT "C = "
110 PRINT C
120 END

130 PROC MAIN()
140 GOTO 40
150 END
    
```

Listing Two BASIC

```

10 REM *** ADDITION ***
20 DIM A,B,C
30 END

40 INPUT "ENTER A":A
50 INPUT "ENTER B":B
60 C=A+B
70 PRINT "C = "
80 PRINT C
90 END
    
```

Listing Three BASIC

```

10 REM *** ADDITION ***
20 DIM A,B,C
30 END

40 PROC ADDADD()
50 PRINT "Enter A":
60 A=INPUT$(2)
70 PRINT "Enter B":
80 B=INPUT$(2)
90 C=A+B
100 PRINT "C = "
110 PRINT C
120 END
    
```

Listing Four BASIC

```

10 REM *** ADDITION ***
20 DIM A,B,C
30 END

40 INPUT "Enter A":A
50 INPUT "Enter B":B
60 C=A+B
70 PRINT "C = "
80 PRINT C
90 END

100 PROC ADDADD()
110 PRINT "Enter A":
120 A=INPUT$(2)
130 PRINT "Enter B":
140 B=INPUT$(2)
150 C=A+B
160 PRINT "C = "
170 PRINT C
180 END
    
```

Listing Five BASIC

```

10 REM *** ADDITION ***
20 DIM A,B,C
30 END

40 PROC ADDADD()
50 INPUT "ENTER A":A
60 INPUT "ENTER B":B
70 C=A+B
80 PRINT "C = "
90 PRINT C
100 ENDPROC
    
```

Listing Six BASIC

```

10 REM *** ADDITION ***
20 DIM A,B,C
30 END

40 INPUT "ENTER A":A
50 INPUT "ENTER B":B
60 C=A+B
70 PRINT "C = "
80 PRINT C
90 RETURN
    
```

Listing Seven BASIC

```

10 REM *** ADDITION ***
20 DIM A,B,C
30 END

40 INPUT "Enter A":
50 A=INPUT$(2)
60 INPUT "Enter B":
70 B=INPUT$(2)
80 C=A+B
90 PRINT "C = "
100 PRINT C
110 END
    
```

Listing Eight BASIC

```

10 REM *** ADDITION ***
20 DIM A,B,C
30 END

40 INPUT "Enter A":
50 A=INPUT$(2)
60 INPUT "Enter B":
70 B=INPUT$(2)
80 C=A+B
90 PRINT "C = "
100 PRINT C
110 END
    
```

Listing Nine BASIC

```

10 REM *** ADDITION ***
20 DIM A,B,C
30 END

40 PROC ADDADD()
50 INPUT "ENTER A":A
60 INPUT "ENTER B":B
70 C=A+B
80 PRINT "C = "
90 PRINT C
100 RETURN
    
```

The surprise from the first competition will be printed within the next issue of B 16.

Competition #2 Entry form

Name _____
Address _____
Computer Type 8 bit / ST

Closing date for competition is April 25th, 1991.
Please send entry form (copy allowed) to BAPUL, 248 Windermere Road, Oakdale, Poole, Dorset BH13 3EF

Solution to Competition #1



Atari Writer Plus VII

For Those Who Don't Want to Read the Book

By Jimmy Boyce (CACE)

Reprinted from Atari Interface Magazine, March 1980

Where were we? Oh yes, we are going to make a printer driver for the Panasonic KC-P1880 Printer. Let's start by thumbing through the manual (pgs 46-47) along with going into custom printer driver menu and write screen to memory we discussed last time. We get another Now that the menu is on the screen, the hands begin:

First, you see INITIALIZE EVERY LINE. To be honest with you, I do not know what that means. According to the book, it doesn't matter because the manual necessary with most printers, and wastes necessary with the 1080s. So, write down the next command, which is the LINE FEED AND CARRIAGE RETURN. Now we get into the good stuff! Strike the [RETURN] key and observe the produced screen change and the "" prompt at this point. For a 1080s, type in [I] [O] [RETURN]. Be lit, so good! Now the cursor moved down a line and another "" appears:

You have typed your first command line of program KC-P1880 printer. After we read of course! What do you mean "no"? How could you make? You say you have run out of numbers and that single "" is all there and I didn't tell you what to do next!

Oh, sorry about that. Try another [RETURN].

Now you should be back to the menu, with the arrow right where you left it. That's not your problem, either? Tell me, Blinky, what's your problem? You don't have a 1080? Did I forget to tell you to get out your printer manual and look up LINE FEED AND CARRIAGE RETURN? Go for it, Blinky. I will wait. While we wait for him, let me show you some pictures of my good daughter:

Oh, Blinky what's with it. That's the right look, and you have found the command and are typing it in right now. Good boy, Blinky. Please note that some printers have underlined command for this function. Stay in there for a moment. I will explain and you can go back and finish it.

Please write down the next command

-UNDERLINE OFF Strike [RETURN], across the "" type in [I] [I] [RETURN]. Same song, second verse, type [H] [O] [RETURN]. Same song, third verse, type in [O] [RETURN] [RETURN].

Now, if your line feed and carriage return was in the form of two commands, then enter them in the aforementioned manner. It was to start from the beginning of the command sequence. The first command will be later if you don't let type it (on the assumption that you typed it on the screen as on the next command, that is).

As a side note, remember that in order to use the underline command in your text, you must strike the ATARI LOCK key (otherwise known as "that little key in the bottom right hand corner of the keyboard") has a symbol (like a devil) on it from top right to lower left and is dark colored at the top side of the divider and light colored on the bottom side of the divider).

Or you can just place the cursor at the beginning of the text you want underlined, hold down the [CONTROL] key and strike the [U] key. Repeat this procedure at the end of the text you wish to be underlined to make it end underlined.

Now that you understand the process for entering the code (you do understand don't you, Blinky? Good, I am proud of you), I am going to let the rest of these "text commands" and give you the [CONTROL] key codes you will use in your text to access them.

I hope this does not confuse you. Believe me, I am not trying to belittle your intelligence with this comment, but the staff can get a little strange until you get used to the commands.

A couple of notes for you. First, whenever there is a command like [CONTROL][O] [O] for instance, hold down the [CONTROL] key and type [O], then release the [CONTROL] key and type a [O]. DO NOT PUT A SPACE BETWEEN THE [O] AND THE [O].

Second, when using the superscript command for showing degrees (in angles or temperature), DO NOT USE A

ZERO—use a lower case [O]. I have not figured out how to use power of a number, except to put in a space between the numbers. The computer cannot recognize the command and a power is suppose commands. If think you are giving an erroneous command and ignore it. Example, you want to type three to the third power. If you type in 3 [] [CONTROL][O] [O] [O], nothing will happen, because AtariWriter doesn't recognize "OTS". Type it in as "OTS". Sorry folks, it's the nature of the beast.

I have been using the printer driver shown below for quite a while now and it has served me well. Another note concerns the LINE FEED AND CARRIAGE RETURN and RETURN WITH NO LINE FEED. Somewhere I read those two commands should be 155. This caused me a lot of dip-switch setting changes on these key bits, using key switches when I changed to other programs I have and wanted a hardcopy of something.

Well, after some experimentation and cutting and creating to send the printer back to Japan, I found that just a simple line feed command was all that was necessary for LINEFEED AND CARRIAGE RETURN but a 155 command was necessary for the RETURN WITH NO LINE FEED. That ended my dip-switch setting problems.

Experiment! The commands will not hurt anything, other than wasting some paper. So, without further rambling on my part, let's go on with the little cheat I have put together for you to use. Remember, this only works on Panasonic KC-P1880 printer!

Well folks, that's about it for the printer driver for this month. I have put in a cheat that cannot be single columned, and the people that put this little rig together will probably never let me write for them again. However if they do, I will not you need mouth.

1050 Battery Backup Modification

By Peter Pasoli

After you have read the information here you will be able to have full battery backup on your Atari system. There has been information on how to do this, but you could only have backup on the computer. This is all right if you only have a tape recorder, but if you have a 1050 drive then you are stuck. As the 1050 requires an AC input you can not add battery backup. There is however a way round this and the modification is not too difficult.

To start with the power section of the 1050 has a circuit to convert the input to drive a 12 volt regulator. All you need to do is disconnect this circuit and do the modification. Undo the 1050 case, remove the drive mechanism (turning down the connector pins and alignment) and then the PCB. Finally, remove the components as follows:-

CR15 CR16
CR17 CR18
CR19 CR20
CT1
Q6

The locations of these components can be seen from the enclosed drawing. Now turn the board over and locate the two copper tracks that go to the power switch. Cut these and add a link shown as

the power switch. Next add a link from Q7 to Q8 as shown. Solder two wires on the power switch and feed them through the hole just above the switch. Now turn the board over and solder these two wires in place of diode CR17. All you are left with now is to add a link as CR19. This is all you have to do for the mod. As far as power you will require a 12 volt PSU and the middle pin of the power section in the plug (+) side. The PSU will need to be 12 volts equivalent at 1.5 Amps. If you have more than one drive with this mod then you will have to take this into account. Now that you have the power mod you can build up the backup unit as shown. I have a PSU that will give 12 volts at 3 Amps and 5 volts at 5 Amps with full battery backup. You can read or write to the disk and remove the mains supply and the system will continue up. As for my system it has been running for over a year and has been well worth the mod. Before you apply power be sure you have done the mod correctly and go over it all.

The power supply shown works like this. The mains is fed into the transformer T1 and the output is fed into the bridge rectifier BY1. C1 is used to remove the ripple from the output and is then fed into the regulator IC1. The output is then fed to the second regulator IC2 via the relay contacts. The capacitor C4 is used to store

the power for the 10ms or so in case the relay drops out. You then have the two outputs at +5 Volts for the Atari and a +12 Volts to run the 1050 drive. So long as the mains is on the relay remains the output from the 12 Volt regulator is fed to the 5 Volt regulator. If the mains is missing the relay will drop out and connect the battery into the 5 Volt regulator, so keep the system with power. To activate the mains is on the end LED D1 will be on and go out if the mains has gone. As for the battery I have a car battery and a 45 Ahr. This will give you a few hours on standby, but if you also have a TV with battery input you can also run that at the same time. If you do then the time on standby may drop to only a few hours. At least you can write your software back to the disk and then leave it. The last thing you do not want to be on the computer for some time and just get close to the end and lose it all. As for the making of the components I have given a list for a two drive system.

Component List

C1 4700 mfd 35 Volt
C2 100 mfd disk ceramic
C3 2200 mfd 25 Volt
C4 4700 mfd 35 Volt
R1 1K ohms 1/4 watt carbon film
D1 LED (red)
BY1 Amp 50 Volt 10 Amp bridge rectifier
RL1 Mains relay (Muller type 6000)
IC1 12 Volt 3 Amp regulator
IC2 5 Volt 3 Amp regulator
T1 Mains on 15 Volts AC max at 3 Amps (150 VA)

You will also require a case for this and a heat sink for the regulators. Also it is best to add a 3 Amp fuse to the mains side and a 5 Amp fuse to the battery lead. If you have a switch mode power supply with 12 Volts out at over 5 Amps you could add the current from the stand alone to it.

Important Notes

Please do not attempt this modification if you have no previous electronic or soldering experience. Peter Pasoli on The 1050 will accept no responsibility for any damage caused by performing or using this modification.

BaPAUG News - Meetings

The following is a brief description of future BaPAUG meetings. All meetings take place at the Keweenaw Community Centre, Pellymore, Millhouse Lane, Keweenaw, Dorsetmouth and start at 7.30.

March 6th - Open Night

A chance to come along and ask questions about Atari computers and software. Several systems will be set up covering topics for beginners, MIDI, WP, DTP etc.

April 3rd - Swap Meet

Got some old software you no longer use? Missed a sale no longer available? Here your chance to swap your old and used software and hardware.

May 1st - MIDI

Demonstration of the latest MIDI software and hardware

June 5th - Potpourri Game

A relaxing evening playing each others favourite game

July 3rd - PD

Demonstration of the latest PD and shareware software.

August 7th - Emulators

So you've got a ST, but what can it? Demonstration of emulators for the ZX/SX, Mac, PC and even the Z801.

Good Ol' Days

by Mike Barnes

I have enjoyed all of the recent posts from everyone writing about their love affair with the old Atari 800's. I guess I can begin my "remember when" story.

I saw an ad for an Atari 800 in print long before I actually saw the computer. There used to be a high tech store called Chaffin in the Washington, D.C. area that only sold high technology products. They were posting ads in newspapers on the Atari 800 and 400 about a year before they ever showed up in the store.

I wished I had kept the flyer. It pictured a businessman wearing a suit carrying an Atari 800 up to his office. The computer sounded impressive as a status symbol with 8 Kbytes of memory and was respectable to 48 Kbytes of memory.

If I remember correctly, the Atari 800 was introduced at about \$1000.00. There were game packs available that included two joystick and the game Star Raiders. That was about \$70.00. There was a \$99 desktop. I don't think the 800's were in the stores yet. At nearly \$100 each, I couldn't afford one anyway. There was also the optional base cartridge.

I bought the Atari 800. I had owned two 8000 based computers that bit the dust prior to buying the Atari. For over a year, I only played the few cartridges and tape based games I had and practiced learning BASIC.

I had always been interested in the technical side of computers. The Atari was the first computer that really did anything but allow me to hack with computers. I think that anyone that purchased computers in the 1980's to 1981 time frame remember computers purely as toys. There was no serious purpose for them. They were not the "productivity tools" they have become. Back then, computers were their most past, they were there solely for fun and experimentation.

When I met my wife, I told her that I had a personal computer. She was a mainframe programmer back then and seen a personal computer. She said that she had heard of them but had never seen one. I told her that I would loan her the computer to try out. She took it home with a copy of Space Invaders. The next morning, she called me and told me she had stayed up all night and wasn't going to work. I think I knew then that we were about for each other.

I was not particularly good at playing Matrix Command and Star Raiders. About 75% of my yearly income had been invested in the Atari. I spent eight or nine nights playing games, programming and trying to understand how it all worked. It is hard to believe how many years when by that I continued use and expand my 800 system. I bought everything from the 80 column boards to expanded memory cards. I bought double density drives and even double sided drives. I set up a SRS once. My wife and I even started a software company, XLine Software, to share our fascination with the Atari computer with other Atari fans.

I soon realized that Atari owners were different from other computer owners. Atari had always neglected its customers and software vendors were slow to recognize the Atari as an equal to the Apple II. Despite this, we knew we had a home product. We knew that our computer had custom designed graphics and 80 chips that were making other computers. The Atari's custom chips gave the Atari a personality that was missing in the other computers. The Atari's language action, programmable character sets and various graphics modes, provided the painter, business work books and hours of challenges. Hell, we weren't even limited by graphic modes, we had display lists.

When I first bought a computer, I had the sense of urgency that I was too late. I had read about all the new facts that were out there that the old ones were making a fortune as computers. I was 38 and I felt like it was too late for me to catch up to these 38 year old kids that already knew so much more than I did. Besides, they all seemed to be so much smarter than me anyway.

Over time, I began to become a confidence about Atari. It was not long enough to play. I wanted to evangelize. I went into business selling many high tech products. The more I had sold programs, TV's, laser disk players and high fidelity equipment. We also sold Atari computers, printers and floppy. I sold enough floppies in three days to pay the rent. (Floppies cost \$1.50 each then)

Over time, I was forced to offer new computers. I started with Apple II clones and moved up to the Columbia which was one of the early IBM PC clones. All

along, the Atari 800 remained my personal computer. I wrote my proposals, memos on the Atari. I wrote articles and typed letters. I learned spreadsheets and databases on the Atari. I learned my first structured language, Action which was similar to a cross between C and Basic. I learned the joys of telecommunications and the principals of DMA conversion.

There is much more I could tell but I will stop to the end. In all these years I have left an Atari II bit computer hooked up. The original Atari 800 has been passed away. It is still likely never to be sold and may eventually find a new home somewhere but it will remain my first "personal" computer.

My five year old used to turn on the Atari II bit and supply eye letters on the screen. She'd call us to the screen and show us that she had typed her name. My wife dragged a box of cartridges. I had collected about fifty Atari cartridges over the years. My daughter has tried every game. She refuses to let the computer every night to play her favorite games. Recently, our Thai exchange student has joined my daughter in playing games. They will sit and challenge each other to game after game of Galaxian, PACMAN and Centipede.

At night, I am sitting at front of my 80848 based core with 4 GB of RAM. I am coding and reviewing as I try to peak the right flow for the program. I am about to type. My computer has a flat card, a CD ROM, a laser printer, mouse, scanner and many other implements of nature that allow me to maintain the image of professionalism I strive for within my clients and associates. Hours go by as I create charts, graphs and graphics make my point. I am considering buying an even larger computer. My 800 80kbyte disk is saturated. I took in the clock and two thousand 2000s. I mean that I am not the only one awake. I am a light from another room. I walk towards the light and see my wife sitting with joystick in hand. She is playing with the Atari. I remind her of the time and go back to finish my report.

Editorial Note:

The above "article" was posted on the Info-Atari Digest, a business system running on Intertec which is available to anyone with suitable X-400 system. For more info send HELP to Info-Atari-Request@NAUCHE.CSUN.EDU

User Group File

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Local Groups (see map below)

Name	Asati User Group Of Ireland
Contact	Mike Casey 7 E. Kavanagh Park, Kilmacost, Co. Dublin XL-ST-0000, Morning, Newsletter, PD
Name	Bloxwich Computer Club
Contact	Edward Hunt 0812 409291 29 Station Street, Bloxwich, Walsall W83 2PD ST-0000, Morning, PD
Name	Bournemouth & Poole Atari User Group (BePAUG)
Contact	Ian Bradner 7401 Yarmy Crescent, Cuckfield Heath, Poole, Dorset, BH17 7TX
Meetings	1st Friday every month at the Kewen Community Centre, Folkestone, Whitland Lane, Kewen
Name	Cardinal Computer Club
Contact	Dorothy Choker 0823 477119 294 Coates Way, Garsdon, Walford, Herts WD2 6PE ST-0000, Morning
Name	London Atari Computer Enthusiast (LACE)
Contact	Glen Leader 143 Redwood Road, Leytonstone, London E11 4XT None - 1st Sat only, newsletter
Name	Mid Cornwall Co-Op Computer Club
Contact	Mike Edwards 0734 894093 8 Victoria Road, Bother, St Austell, Cornwall PL28 8P ST-0000, Meetings
Name	Norwich User Group
Contact	Ron Ward 0625 611146 45 Colchester Road, Lakenham, Norwich NR1 2NG
Meetings	1st Sunday every month - Contact Ron for time & place
Name	North West ST User Group
Contact	Derek Bony 3 Thicket Gardens, Chalfontwood, Pympton, Plymouth, Devon, PL7 3BP
Name	XL-ST, Morning Newsletter, NRG PD
Name	Orkney Computer Club
Contact	Mike Ford - 0755 739165 45 Elmscott Road, Stronach, Wilsa, SN1 3LR XL-ST-0000, Morning, PD
Name	The Friday Club
Contact	Nicola Evans 0908 411273 4 Byron Drive, Newport Pagnell, Bucks MK24 4LQ
Meetings	Every Friday at Chesham School Physics Dept. GB is members home.
Notes	XL-ST, Hardware & Software development.
Name	Wigan Computer Club
Contact	Alan Owen 0942 312642 1 Lupton Close, Wigan - Lancs. WN1 4LLA ST-0000, Morning Newsletter, PD
Name	XL/SE Advn
Contact	Bill Seaton 0754 250994 13 St. Anne Avenue, Seatonville, Midhurst TW19 7BL None

Order To All User Groups

Your user group will be removed from our list unless we receive
confirmation of your existence - you have been warned!

Special Interest Groups

Name	GF4 User Magazine
Address	104 Holland Street, Green, Chesham TW20 1SD
Telephone	0275 254129

Norwich Groups

Name	Association of Atari User Groups
Address	41 Colchester Road, Lakenham, Norwich NR1 2NG
Telephone	0623 611149

International Groups

Name	Club Comanche
Address	87 P. 49 - 95110 Sauron, France
Name	German Atari Group
Address	PO Box 6, Post, MI 45221, USA
Name	Johnsenberg, Atari Computer Enthusiast (JA/CE)
Address	3 Winchell Street, Ward Rd., Johannesburg, South Africa, 2002
Name	Maryland Atari Computer Club (MAACC)
Address	8281 Woodfield Way, Ellicott City, Maryland 21045 USA
Telephone	0811-441 7556
Newsletter	M.A.C.C. News
Name	North East Atari Team (NEAT)
Address	P.O. Box 34150, Elise, Phila., Pa. 19118, USA.
Newsletter	The Arcsman
Name	Northern Virginia's Atari Computer User Group
Address	5612 Thorton St., Springfield, VA 22151, USA
Name	Pittsburgh Atari Computer Enthusiasts (PA/CE)
Address	P.O. Box 2403, Pittsburgh, PA 15245 USA
Telephone	(412) 571-6861



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